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THE INDUSTRIAL DEVELOPMENT OF ARGENTINA

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EXPLANATORY NOTE

Resolution 250 (XI) of 14 May 1965, adopted by the Economic Commission for Latin America (ECLA) at its eleventh session, requested the Latin American Governments "to prepare national studies on the present status of their respective industrialization processes for presentation at the regional symposium". With a view to facilitating the task of the officials responsible for the national studies, the ECLA secretariat prepared a guide, which was also intended to ensure a certain amount of uniformity in the presentation of the studies with due regard for the specific conditions obtaining in each country.

Studies of the industrial development of fourteen countries were submitted to the Latin American Symposium on Industrial Development, held in Santiago, Chile, from 14 to 25 March 1966, under the joint sponsorship of ECLA and the Centre for Industrial Development, and the Symposium requested ECLA to ask the Latin American Governments "to revise, complete and bring up to date the papers presented to the Symposium".

The work of editing, revising and expanding the national monographs was completed by the end of 1966 and furthermore, two new studies were prepared. The ECLA secretariat attempted, as far as possible, to standardize the presentation of the reports, in order to permit comparison of the experience of the different countries with regard to specific problems, particularly in the field of industrial policy.

The national studies on industrial development, to be presented to the International Symposium relate, in alphabetical order, to the following countries: Argentina, Bolivia, Brazil, Central America, Chile, Colombia, Cuba, Ecuador, Guyana, Mexico, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay and Venezuela.

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/Chapter I

Chapter I

HISTORICAL OUTLINE

The Argentine economy's evolution between 1950 and 1963 was characterized by an irregular growth of the gross domestic product, with an average cumulative annual rate of 2 per cent. As the population increased during this period at an average annual rate of approximately 1.8 per cent the gross domestic product per inhabitant, in spite of growing by 3 or even 4.1 per cent a year in certain periods, was scarcely higher in 1963 than in 1950.

The basic feature of each of the periods of growth was rapid expansion in the industrial sector (which is the most dynamic of the productive sectors) with the agricultural sector remaining relatively stagnant.

A large proportion of Argentina's exports are produced by the agricultural sector and only a few by the industrial sector.

In contrast with the agricultural sector, manufacturing industry showed an upward trend during the period in its physical volume of production, which made it the main dynamic factor in the Argentine economy. This volume grew by 37.1 per cent over the whole period at a cumulative annual rate of 2.5 per cent.

As different groups of industries had very different growth rates, there occurred a very substantial change in the composition and structure of the over-all supply of manufactured goods. This process will be described in detail in the following paragraphs.

One group (consisting of industries producing for subsistence and immediate consumption needs) grew at a slower rate than the economy as a whole, achieving a total increase of only 8.8 per cent between 1950 and 1961. It was these traditional activities which initiated the industrial development of the country. They include food, tobacco, wearing apparel, textiles, printing, leather and wood, which mainly manufacture non-durable consumer goods for the internal market. During the last 10 or 15 years their real over-all production value has grown by percentages similar to that of the natural growth of the population, for which reason they may may be called developed industries.

However, more detailed analysis reveals that there have been changes within this group, due particularly to certain new sectors which have grown up in it making it considerably more dynamic by introducing novel features into the composition of the articles manufactured. Examples of these are, the new packed foods, man-made fibre textiles, pressed wood sheets for carpentry, etc. These have forced the traditional suppliers to try to improve their competitive position in order to avoid being forced out of the market.

This process was most marked in the textile industry. Apparent consumption of man-made fibres increased by more than four times between 1958 and 1962. The explosive growth of the supply of this type of fibres produced corresponding changes in the productive structure of the whole textile sector and aroused a strong reaction in the sectors traditionally engaged in manufacturing natural fibres in an effort to adapt themselves to the new competitive conditions of the market. For this purpose these sectors adopted new technological processes; they made large investments in capital goods, which in some cases were on a scale greater than what was needed for a normal process of replacing and modernizing existing equipment and thus, subsequently, resulted in a margin of under-utilization of installed capacity.

The group of dynamic or developing activities consists chiefly of industries producing capital and durable consumer goods such as, petroleum products, chemicals, iron and steel, rubber, paper and paperboard, non-metallic minerals (stone, glass, ceramics). These industries are essentially engaged in producing goods for use as raw materials by other industries and provide equipment designed to produce for consumption needs of a more advanced kind and belonging to a higher economic and social level of development of the community.

The new productions established in Argentina, which are based on high capital density, advanced technology and more go-ahead management than that of the traditional activities belong primarily to this group. As well as benefiting the economy by the rapid expansion of its existing

/activities, it

activities, it brings a dynamism previously lacking into the manufacturing structure and makes the most important import substitutions. Its development provides the only real prospects of reducing the external vulnerability of Argentina's economy.

/Chapter II

Chapter II

RELATIVE IMPORTANCE, STRUCTURE AND GENERAL CHARACTERISTICS OF MANUFACTURING INDUSTRY

1. The gross manufacturing product in the gross domestic product

From the beginning of the century until about 1920 the agricultural sector's percentage of the gross domestic product was double industry's (approximately 37 per cent contributed by the agricultural sector and 13.8 per cent by industry in 1900-1904, and 30.7 per cent by agriculture and 15.3 per cent by industry in 1915-1919). This ratio subsequently began to equal out, agriculture's contribution being only 30 per cent greater in 1930, and by 1945 had been reversed. Since then the manufacturing contribution has always been greater than those of all the other sectors by which the gross domestic product is generated.

Table 1 shows the evolution of the composition of the gross domestic product (at market prices) between 1960 and 1965 and brings out the important part played by industry, with its contribution of roughly 35 per cent to the formation of this product.

2. The contribution of the chief branches of industry to manufacturing as a whole

For the sake of more thorough analysis it is useful to return to the characterization of industry of chapter I and distinguish between developed and developing industries.

The different growth rates of these two sectors resulted in a significant change in their percentage contributions to the formation of gross manufacturing product, as can be seen from tables 2 and 3.

The developing industries represented 40 per cent of the total value added of manufacturing industry in 1950 and over 50 per cent from 1961 onwards.

/Table 1

Table 1

ARGENTINA: EVOLUTION OF THE GROSS DOMESTIC PRODUCT AT MARKET PRICES

(In millions of Argentine pesos)

	1960	1961	1962	1963	1964a/	1965a/
Agriculture and fishing b/	146 354	143 477	144 710	142 109	156 175	165 406
Quarries and mines	12 100	16 021	17 110	16 445	17 255	20 549
Manufacturing industry	336 911	362 179	340 818	326 243	369 805	406 421
Building c/	43 894	46 814	42 840	40 426	43 981	46 703
Trade	169 036	188 982	182 221	161 598	170 526	184 735
Transport and storage	52 480	55 367	52 585	49 174	53 372	56 237
Communications	5 302	5 789	5 408	5 005	5 185	5 730
Electricity, gas and water	13 294	16 019	17 814	18 810	20 725	23 181
Banks, insurance, etc.	20 107	21 152	22 299	21 896	21 997	22 573
Ownership of housing	23 134	23 226	23 273	23 342	23 838	24 169
Government services	65 062	65 648	65 648	65 517	65 648	65 648
Other services	82 264	83 745	84 238	85 966	88 680	89 668
Total for the sectors	969 938	1 028 419	998 964	956 532	1 036 877	1 111 020
Indirect taxes not assigned to section	15 491	15 449	14 984	14 948	15 553	16 665
Total	985 429	1 043 568	1 013 948	970 880	1 052 430	1 127 685

Source: National Development Council (CONADE). National Development Plan.

/ Provisional figures.

/ Includes agricultural buildings and improvements.

/ Does not include sectoral investments in buildings and improvements.

/Table 2

Table 2

ARGENTINA: EVOLUTION OF THE VALUE ADDED OF MANUFACTURING INDUSTRY, AT MARKET PRICES

(Millions of 1960 Argentine pesos)

Groups	1960	1961	1962	1963	1964 a/	1965 a/
A. Developing industries	162 569.0	188 366.6	175 504.7	161 238.8	196 096.3	223 286.9
Paper and paperboard	5 555.0	6 849.3	6 671.6	6 988.3	7 221.5	8 561.7
Metals (including iron and steel)	34 335.0	40 893.0	36 944.5	37 116.1	50 609.8	55 299.2
Vehicles and machinery (including motor cars and tractors)	44 595.0	53 291.0	46 913.9	35 377.4	51 997.8	59 692.3
Electrical machinery and apparatus	14 726.0	17 671.2	13 783.5	11 677.7	13 739.4	17 685.9
Stones glass and ceramics	11 487.0	12 899.9	12 210.7	10 556.6	11 280.2	13 206.6
Petroleum products	25 564.0	27 685.8	31 418.2	31 009.1	32 594.1	35 428.7
Chemical (including petro-chemical) products	20 545.0	21 366.8	20 031.8	19 415.0	21 716.0	26 111.0
Rubber	5 762.0	7 709.6	7 530.9	5 698.6	6 937.4	7 301.5
B. Developed industries	174 342.0	173 812.4	165 313.7	165 004.3	173 708.4	183 133.8
Food and beverages (including meat)	65 369.0	64 715.3	69 291.1	77 135.4	71 117.0	72 723.9
Textiles	32 630.0	33 256.8	25 756.5	24 524.0	31 549.6	34 016.2
Others and artisan production	76 143.0	75 840.3	69 266.2	63 344.9	70 842.2	76 393.7
Total	336 911.0	362 179.0	340 818.5	326 243.1	369 804.7	406 420.7

Source: National Development Council (CONADE).

a/ Provisional figures.

/Table 3

Table 3

ARGENTINA: INDEXES OF THE VALUE ADDED OF MANUFACTURING INDUSTRY AT MARKET PRICES

(Index: 1960 = 100)

Groups	1950	1955	1960	1961	1962	1963	1964	1965
1. Developing industries	46.8	70.7	100.0	115.9	108.0	99.2	120.6	137.3
Paper and paperboard	73.7	91.7	100.0	123.3	120.1	115.0	130.0	154.1
Metals (includes iron and steel)	49.3	86.1	100.0	119.1	107.6	108.1	147.4	161.1
Vehicles and machinery (includes motor cars and tractors)	32.5	50.7	100.0	119.5	105.2	88.3	116.6	133.9
Electrical machinery and apparatus	19.9	55.7	100.0	120.0	93.6	79.3	93.3	120.1
Stone, glass and ceramics	83.5	93.7	100.0	112.3	106.3	91.9	98.2	115.0
Petroleum products	56.6	72.7	100.0	108.3	122.9	121.3	127.5	138.6
Chemical products	53.0	74.8	100.0	104.0	97.5	94.5	105.7	127.1
Rubber	46.0	83.6	100.0	133.8	130.7	98.9	120.4	126.7
. Developed industries	92.1	97.0	100.0	99.7	94.8	94.6	99.6	105.0
Food and beverages	89.2	97.6	100.0	99.0	108.0	118.0	109.1	111.3
Textiles	94.4	98.1	100.0	101.3	81.5	74.7	96.1	103.6
Others and artisan production	94.5	95.9	100.0	99.6	91.0	83.2	93.0	100.3
Total	69.5	83.6	100.0	107.5	101.2	96.8	109.8	120.6

ource: National Development Council (CONADE).

At the same time as the growth in the production and complexity of factory industry, the contribution of artisan production, already very small in 1950 (7.1 per cent of the added value of manufacturing industry), fell to 4.4 per cent in 1961.

It is worth mentioning the changes which have occurred in the uses of industrial production during the period. Between 1950 and 1961 the part used for investment increased by four and half times (in terms of constant prices) and its relative importance rose from 4 to 11 per cent. (See table 4.)

The part used for consumption also increased, but only by 25 per cent, and its contribution to the total fell.

The part used for export remained at the same level over these years. This is because manufactured exports consist almost entirely of articles of agricultural origin and their development was held back by the stagnation of this sector. There were, however, large increases in 1962 and 1963 as a result of drops in domestic consumption.

It is worth giving some details of the situation of non-traditional industrial exports, which showed the following large increases in 1963: iron and steel products, 13.7 million dollars; medicines and pharmaceutical products, 3.5 million dollars; machinery and motors in general, 10.5 million dollars; paper and paper board, 4.8 million dollars. These open up new prospects, whose effect on domestic industry will be to enable installations to be used at fuller capacity.

The remaining part of industrial production, that used for intermediate consumption, increased by 65 per cent during the period, but its share in the total grew only from 31 per cent to 33 per cent. (See again table 4.)

This complex industrial development did not result in immediate savings of any significance in imports of intermediate goods. The beginning of domestic production of many goods, most of them durable consumer goods, created an induced additional demand to meet which new imports of inputs and equipment for their production were needed, and these quickly outweighed the value of what was substituted in other sectors.

/Table 4

Table 4

ARGENTINA: USES OF MANUFACTURING PRODUCTION

(Percentage composition)

	1950	1955	1960	1961	1962	1963
1. Production value	100.0	100.0	100.0	100.0	100.0	100.0
2. Investment	3.9	5.7	10.2	11.1	10.4	9.3
3. Consumption	55.5	53.1	51.1	49.4	48.9	48.5
4. Exports	9.2	5.9	5.9	5.9	7.6	9.1
5. Remainder for intermediate consumption	31.4	35.3	32.8	33.6	33.1	33.1

Source: National Development Council (CONADE).

The motor vehicle, tractor and electrical apparatus industries provide the most obvious examples of this process. The savings in foreign purchases of these types of finished goods have been counter-balanced by the additional demand created for the semi-manufactures, raw materials and constituent parts needed to maintain their growing production.

Parallel with this, the productive processes for an important group of intermediate products of, among others, the iron and steel, paper and paperboard and chemical industries, are being integrated vertically. In this group it is vital that the investments already made should mature and that those programmed should be carried out in order that the resulting import substitutions may be carried out on a considerable scale.

In addition, the re-equipment of traditional industries and the development of new have given rise to large imports. There have been larger than necessary, because the lack of any adequate policy for the financing of domestic industry's equipment turned orders towards foreign suppliers.

These factors had the result that in over-all terms industry did not reduce its pressure on the demand for imports during the period 1950-1963.

A further factor which prevented gradual substitution of imported products was the disorder and lack of programming of industrial investments.

A certain degree of instability has been caused in industrial development by bottlenecks in the production stages of different sectors.

3. Financing of manufacturing industry

The financing of industry is analysed on the basis of information obtained from a sample of industrial stock companies. This enabled some idea to be obtained of the major headings of capital formation in Argentine industry.

Approximately 65 per cent of the total use of funds consisted of real investment and 35 per cent of financial investment.

60 per cent of real investment was used for increasing fixed assets, and the other 40 per cent for inventories.

85 per cent of financial investment was assigned to current liabilities and the other 15 per cent to liquid assets.

The share of domestically produced goods in the increase of fixed assets has been growing (as will be discussed below), rising from 53 per cent in 1957 to 67 per cent in 1961. It should be mentioned, however, that 30 per cent of those assets consist of civil works, the remaining 60 per cent being machinery and equipment.

The investment-product ratio increased from 12.5 per cdnt in 1953 to 19 per cent in the period 1957-1961. Corresponding to the increase of this co-efficient is the fact that the enterprises have been increasingly resorting to internal financing.

Between 32 and 35 per cent of internal financing consists of depreciation allowances, the remainder being undistributed profits.

50 per cent of the external financing of the enterprises corresponds to suppliers credits, 15 per cent to shares subscribed and the remaining 35 per cent to bank credit. From 1960 onwards the accumulation of fiscal debts, including social charges, constituted a further important contribution.

(a) Internal financing of the enterprises

The continuous rise in the general price level has affected the investment policies of the enterprises by making their depreciation allowances insufficient for financing the normal renewal of equipment. Extraordinary amortizations and book revaluation of fixed assets have been only partly able to make up for this.

It has been estimated that the amortizations credited by the enterprises have alone covered between 25 and 35 per cent of the amortizations at replacement cost. As allowances for renewal of capital goods apart from amortizations are taxed by law, reinvestment of profits has seemed to offer the best solution (payment of dividends in shares).

In the matter of reinvesting profits the stock companies have generally followed a different policy from that of one-man or partnership enterprises.

Until 1955 the stock companies distributed their profits in cash payments in a proportion of 5 to 1 to the shares distributed. Since that time the proportion of profits capitalized has grown from 30 per cent to (at the present day) 60 per cent. The composition of dividends has changed correspondingly to a relation of 1.5 to 1 between shares and cash. Higher capitalization has been achieved by compensating shareholders for the relative decrease of their income with an increase in the proportion of profits distributed (cash and shares), to the detriment of the formation of reserves.

According to the fragmentary information available, which cannot be considered representative, the one-man and partnership enterprises have had a lower rate of reinvestment than the stock companies.

(b) Bank financing for manufacturing industry

The two procedures used to analyse bank financing for manufacturing industry have given apparently contradictory results, which, however, are readily explicable as arising from the different frames of reference used.

If the balance of bank loans to the different sectors of the economy is considered, industrial production can be seen to have increased its share with respect to the economy as a whole. (See table 5.) This increase was most marked in the period 1953-1960; it represented 35 per cent in the former year and, growing in each successive year, reached 45.9 per cent in 1960. In 1961 it decreased slightly (to 44.3 per cent) and then resumed its upward growth to reach the maximum of the period (46.1 per cent) in 1963.

This larger share in the bank loan balances does not mean, as might appear, that a relatively greater volume of loans was available for industrial production, but only that this suffered less from the effects of the credit restrictions than the other economic activities.

This assertion is not obvious from table 5 because the fact that industrial production increased its share in the bank loan balances does not by itself mean that industry enjoyed greater credit facilities than the other sectors.

To elucidate this point the percentage structures of the bank loan balances and of the gross domestic product at market prices have been compared; lastly, table 6 gives the relation between the relative importance of the loan balances of industry and the percentage contribution of industrial production to the formation of the gross domestic product.

/Table 5

Table 5

ARGENTINA: BANK LOAN BALANCES

(Percentages)

	1953	1955	1960	1963	1964
Primary	26.6	27.4	25.1	22.9	26.5
Industrial	35.0	35.4	45.9	46.1	43.0
Electricity and gas	1.8	1.4	0.5	0.8	1.4
Building	3.9	3.5	3.9	5.5	3.7
Trade	12.8	14.2	15.8	16.1	15.8
Services	11.0	10.1	4.5	4.7	4.8
Official bodies	5.8	4.7	1.3	0.9	1.2
Miscellaneous	3.1	3.3	3.0	3.0	3.6
Total	100.0	100.0	100.0	100.0	100.0

Source: Statistical Bulletin of the Central Bank of the Argentine Republic.

As appears from this, in 1954 and 1955 the relation was lower than in the base year (1953=100), but in the rest of the period it was always above 100. This means that in over-all terms industry has increased its share in the total of bank loans more than its contribution to the formation of the gross domestic product.

It is interesting to note that the maximum value of thr period occurred in 1959, a year of credit restriction when, as will be seen below, bank financing for industrial production reached its minimum. This confirms the above conclusion, that industry was merely the sector least affected by credit restrictions.

The second of the analyses made was based, like the first, on the bank loan balances for the 31st December of each year, but took into account only industry and the industrial production value.

The analysis had to confine itself, at the over-all level as well as that of the particular branch, to the total of loans, as lack of information ruled out separate study of credit for investment and for working capital or long-, medium- and short-term credits.

If advances on current accounts and discounted bills can be considered short-term credits, the balance of secured loans would include short-term as well as long- and medium-term credits, which would have made analysis of this type completely impossible.

As can be seen in table 7, the co-efficient of bank loan balances relative to the industrial production value was 11.9 per cent in 1953 and decreased every year, with slight ups and downs, to 9.2 per cent in 1957; it showed a slight increase in the next year (10.0 per cent).

/Table 6

Table 6

ARGENTINA: RELATION OF THE PERCENTAGES OF THE INDUSTRIAL LOAN BALANCES IN THE TOTAL TO THE PERCENTAGE CONTRIBUTIONS OF INDUSTRY TO THE GROSS DOMESTIC PRODUCT

Year		Index of the relation
1953	115.1	100.0
1954	108.2	93.7
1955	102.9	89.1
1956	120.8	104.6
1957	120.1	104.0
1958	122.8	106.3
1959	137.8	119.3
1960	131.9	114.2
1961	124.8	108.0
1962	133.3	115.4
1963	134.8	116.7
1964	120.4	104.2

Source: Prepared by the National Development Council (CONADE).

Table 7

ARGENTINA: RELATION BETWEEN THE INDUSTRIAL PRODUCTION VALUE AND THE BANK LOAN BALANCES

Year	Industrial production		Percentage
	A Production value a/	B Balance of loans a/	B/A
1953	79 935	9 543	11.9
1954	92 099	10 619	11.5
1955	116 842	12 140	10.4
1956	151 994	16 086	10.5
1957	202 205	18 539	9.2
1958	287 764	28 675	10.0
1959	565 500	38 785	6.9
1960	721 292	57 086	7.9
1961	866 079	74 936	8.7
1962	1 034 111	82 345	8.0
1963	1 245 750	101 528	8.1
1964	1 780 177	132 327.6	7.4

Source: National Development Council.

a/ In millions of Argentine pesos.

In 1959 the contribution of bank credit to the financing of industrial production fell abruptly, reaching its minimum for the period (6.9 per cent). This was due to the monetary policy measures introduced in that year, which included raising minimum cash reserves of the banks and restricting credit. From then onwards contribution increased, though without at any time reducing the levels of 1953-1958.

This decrease did not affect all branches of industry equally; thus, while some have maintained the loan balances-value relation of 1953 or have even raised it, others have undergone large decreases in this form of financing. A table was prepared giving these different changes divided into two groups. (See table 8.)

Table 8

ARGENTINA: CHANGES IN BANK FINANCING OF INDUSTRY

(Percentages)

With increased bank financing		With decreased bank financing	
1. Electrical machinery	+ 86.0	1. Metals	5.3
2. Pulp, paper, and printing and allied industries	+ 13.3	2. Petroleum, chemicals	9.1
3. Leather	+ 1.3	3. Textiles	10.4
		4. Stone, glass and ceramics	13.8
		5. Wood	21.3
		6. Vehicles and machinery	34.9
		7. Other industrial products	
		8. Food, beverages and tobacco	59.9

It is worth remarking that the general level of bank financing for industry fell by 37.8 per cent.

Naturally, the differences noted correspond to the first and last years of the period analysed, and though they also correspond to the maxima and minima of financing in certain cases (food and beverages), in most the peaks occurred in intermediate years.

/4. Industrial

4. Industrial employment in the total active population

Argentina's total population has grown at a rate of 1.7 per cent a year in the last few years.

Industrial employment has maintained itself at roughly 25 per cent of the total active population, with some small fluctuations.

In the agricultural sector, on the other hand, employment has greatly decreased, falling from 2.4 million persons in 1947 to 1.5 million in 1960.

To complete the comparison, the services sector (trade, transport and communications, energy, sanitary services, etc.) represents the most important source of employment; in 1960 and 1963 it employed about 48 per cent of the labour force of the country.

Table 9 gives total employment and its distribution by sectors for 1950, 1960 and 1963.

Table 9

ARGENTINA: EMPLOYMENT BY SECTORS OF ACTIVITY

(In thousands of persons and percentages)

	1950		1960		1963	
	Volume	Percentage	Volume	Percentage	Volume	Percentage
Agriculture and fishing	2 211.1	29.0	1 495.7	18.6	1 515.0	19.1
Mines and quarries	33.5	0.4	45.0	0.6	47.3	0.6
Manufacturing industry	1 782.4	23.3	2 165.9	26.9	2 033.4	25.7
Building	503.3	6.6	500.5	6.2	436.9	5.5
Services						
Trade	865.9	11.3	994.8	12.3	975.7	12.3
Transport, storage and communications	463.5	6.1	571.9	7.1	555.6	7.0
Electricity, gas and water	57.3	0.7	74.9	0.9	75.9	1.0
Other services	1 725.2	22.6	2 210.5	27.4	2 281.9	28.8
Total	7 642.2	100.0	8 059.2	100.0	7 921.7	100.0

Source: National Development Council (CONADE)

/5. Location

5. Location of industry

In the past the dependence of Argentine industry on foreign trade as a result of the lack of domestically produced raw materials or (as in the case of the meat packing plants) of the fact that its production was destined for export, meant that most establishments were installed in the federal capital and its surroundings (Greater Buenos Aires) and on the river litoral where there were overseas ports.

Subsequently the rapid growth of the population of Greater Buenos Aires created a large market and a supply of manpower large enough to warrant installing every type of industry in that area. As a reference, a survey of the regional economic structure made in 1953 showed that at that time the urban conglomeration known as Greater Buenos Aires (which comprises the federal capital and its conurbations) accounted for 64 per cent of the total gross value added.

So far the efforts made towards promoting diversified industrial development in the interior of the country have not had much success.

In general, the industrial centres of the interior confine themselves to the processing of basic agricultural products characteristic of their zone. This is so in Mendoza (grapes), Chaco (cotton), Tucumán (sugar cane), etc.

The next most important industrial area is constituted by the other districts of the province of Buenos Aires, whose productive activities consist basically in the processing of agricultural raw materials.

An industrial belt has grown up on the west bank of the river Paraná between Buenos Aires and Santa Fe, which concentrates, in particular, about 80 per cent of iron and steel production and a large proportion of petrochemical production. The province of Santa Fe is itself an important industrial area, largely because it borders on the Paraná.

The contribution of the province of Cordoba has grown in the last few years as a result of the installation of motor vehicle, railway material and other plants, which have had a very rapid growth and have produced an expansion of subsidiary industries.

/Chapter III

Chapter III

PLANS OR PROGRAMMES OF INDUSTRIAL DEVELOPMENT

1. The national development plan for 1965-1969

(a) The National Development Council

It was the National Development Council (CONADE), responsible to the Office of the President, which prepared the National Development Plan for 1965-1969. This body is responsible for defining long-term development objectives, preparing medium-term plans and annual programmes, analyzing projects and assessing the results of the country's economic policy. Its decrees of constitution and organisation were dictated in August 1961, October 1963 and January 1964.

The Council consists of a Board of Directors, which determines the general orientation of its work, and a Permanent Committee which provides the technical and administrative direction. The Board of Directors is presided over by the Minister of Economic Affairs and consists of a vice-president, an executive secretary, a technical secretary and councillors representing each ministry and state secretariat with economic responsibilities, the Central Bank and the Federal Investments Council. The Permanent Committee consists of the vice-president of the Board of Directors and the technical and executive secretaries. The various working groups: that of over-all programming, those of sectoral programming (agriculture, industry and mining, energy , transport) and social programming, and those for public investment, special projects and special programmes of basic research, operate as branches of the technical secretariat.

Previous to formulating the plan it was necessary to make an extensive study of the economy during the last few years.

The preliminary report on the plan was published in September 1964. When the revised edition was being prepared (it appeared in September 1965), the Development Council obtained the results of economic activity in 1964, which were important in order to provide a better basis for the programmes, and held sectoral advisory meetings with entrepreneur organizations and with some of the trade unions.

/The Development

The Development Council continues to work on improving the economic indicators, such as the revised index of industrial production, the employment and unemployment surveys, the economic budget, in order that government policy can be adapted in good time to the needs of the changing situation of the economy.

The recommendations proposed in the plan have a double purpose: to orient the work of the government agencies and to outline policies for leading the activities of the private sector and the development of the economy in the directions desired.

Industrial development appears in the plan as an integral part of an over-all economic development policy. Besides the over-all objectives and projections applying, among other fields, to population, the labour force and employment, to the external sector, to the public sector and to the financing of the plan, sectoral development programmes have been established for:

- Agriculture, forestry and fishing
- Industry and mining
- Energy
- Transport and communications
- The social infrastructure: Education, Public Health, Housing, and Sanitary Services.

A description of the over-all programming and of the programmes for industry follows.

(b) Over-all objectives and projections of the plan

To provide a general frame of reference some of the macro-economic projections of the plan will be given. In this way, the over-all framework of the programme for development of Argentine industry and its chief sectors in the period 1965-1969 can be judged with greater understanding.

(i) Growth of the gross domestic product. The development plan envisages a gross domestic product of 33.6 per cent above its 1964 level by 1969, growing at an average annual rate of almost 6 per cent, which is equivalent to 4.3 per cent a year per capita. (See table 10.)

/Table 10

Table 10

ARGENTINA: PROJECTION OF THE GROSS DOMESTIC PRODUCT AT MARKET PRICE

(Index 1960 = 100)

	1964 a/	1965	1966	1967	1968	1969
Agriculture and fishing b/	106.7	113.0	117.7	122.6	126.7	131.1
Quarries and mines	142.6	169.8	190.2	208.0	235.7	268.3
Manufacturing industry	109.8	120.6	131.7	141.9	150.8	160.2
Building c/	100.2	106.4	121.0	133.0	139.1	144.1
Trade	100.9	109.3	117.2	125.7	132.1	138.4
Transport and storage	101.7	107.2	116.0	122.2	128.6	135.6
Communications	97.8	108.1	117.5	122.3	127.3	134.1
Electricity, gas and water	155.9	174.4	196.6	216.3	233.7	251.3
Banks, insurance and the like	109.4	112.3	115.4	118.6	121.8	125.0
Ownership of housing	103.0	104.5	105.9	107.1	108.2	109.5
Government services	100.9	100.9	100.9	100.9	100.9	100.9
Other services	107.8	109.0	110.0	111.0	112.0	113.0
Total	106.9	114.5	122.3	129.7	136.0	142.5

Source: National Development Board (CONADE).

a/ Provisional figures as on the 30th January 1965.

b/ In contrast to the series in table 1, this does not include sectoral investments in buildings and improvements.

c/ Includes agricultural buildings and improvements.

/This target

This target seems ambitious in comparison with the growths achieved in the last 15 years, in which the five years of most rapid and sustained growth, namely 1953-1958, showed an increase of the gross domestic product of only 27 per cent, or roughly 5 per cent a year; but in contrast with that period, the quinquennium beginning in 1965 has been preceded by a triennium of large investments (1960-1962) followed by a recession (1962-1963) which prevented the new installed capacity from being used.

For this reason a more rapid growth to the point of achieving full employment of manpower and use of installed capacity is envisaged for the first years of the plan. In addition to this, the improvements of the economic infrastructure programmed for these first years will substantially increase the efficiency of the productive activities. An increase of the gross domestic product by 7.1 per cent has therefore been projected for 1965, by 6.8 per cent for 1966 and by 6.1 per cent for 1967, after which the growth rate will be maintained at a steady 4.8 per cent for the following years. This latter rate can perfectly well be maintained over the long-term by a country with abundant natural resources and an internal market of considerable size, and which saves 20 per cent of its income.

(ii) Aims of the National Development Plan and its strategy. The aims of the plan in outline are as follows:

(a) That the product per capita should have a continuous growth during the period considered;

(b) That full employment of the labour force should be maintained;

(c) That a more equitable income distribution should be achieved;

(d) That the level of consumption should rise in accordance with the expansion of production capacity and the improvement of present levels of education, public health and housing;

(e) That inflationary tendencies should be gradually eliminated.

The strategy implicit in these aims is as follows:

(a) To obtain an effective solution to the needs and real prospects of the country in the supply of agricultural products;

(b) To achieve full use in economic conditions of industrial installed capacity.

(c) To achieve

(c) To achieve industrial integration in the more dynamic, basic and not yet developed sectors, so as to overcome the present disequilibrium between production of final and of intermediate goods and thus substitute imports, obtain better use of the production capacity of capital goods and promote use of existing natural resources and raw materials;

(d) To create a surplus in the trade balance which will enable financial obligations to be reduced during the period without preventing an increase of imports;

(e) To diversify exports as a protection against the effects of the fluctuations of the world markets.

(f) To consolidate the infrastructural projects needed for the period itself and for ensuring subsequent development.

(c) Conditions which must be fulfilled by the main production and services sectors

The Argentine economy's evolution during the last few years was characterized by periods of dynamic industrial growth with agriculture tending always to remain more or less at a standstill.

The growing demand for imports as a result of industrial growth was not sufficiently compensated by substitution processes or, owing partly to the relative stagnation of its production and partly to falls in international prices when the physical volume of its production did increase, by a large growth of exports from the agricultural sector.

As a result each of these periods of growth provoked a crisis in the balance of payments which ended by producing internal recession.

It is essential that this recurrent process should be broken if there is to be continuous growth. This can be done in present circumstances by taking full advantage both of the comparatively favourable position which Argentine agricultural production enjoys in the world market and of the particular conditions which now obtain.

(i) The agricultural sector. For the above reasons, the plan projects the development of the agricultural sector through modernization of its production techniques and, by improving methods of land use, through an increase of land productivity. The uncertainty which at present discourages investment can be reduced by following a policy which at once makes it easier to obtain funds for investment in this sector and tends to stabilize the prices of its products.

The growing world demand for meat makes it obvious that the largest growth trends for exportable production should occur in livestock raising and gran fodder for animals. Growth thus specifically designed to take advantage of the situation in the world markets should be combined with a generally expanding agricultural production able to satisfy a growing domestic demand and maintain existing markets.

(ii) The industrial sector. Parallel with the development of agriculture, which will be able to provide a classic solution to the needs of the developing economy, the industrial sector should intensify the trends which resulted in its recent expansion, so that the productive activities encompass all projects pertaining to basic industries and the production capacity of capital goods is more effectively utilized. In this way the import substitution process, which is almost complete at the final consumer good level, will be extended into the industries producing semi-finished products and production goods.

It is essential for the economic growth of Argentina that its industry should depend less on foreign supply and thus maintain its dynamism, since only industry can provide employment on a massive scale for the increasing active population. Industry should adapt supply to the changing pattern of demand in which manufactured articles are becoming an increasingly important factor as per capita income rises.

Moreover, as labour will increase its share in the distribution of the industrial product, the dynamic expansion of industry will contribute to the objective that a more equitable distribution of income be achieved at the same time as the gross product per capita is increased. But in order that the dynamic growth of industry should not in turn create anomalous factors capable of affecting the stability of the economy, the plan lays down certain conditions under which this growth must take place.

The processes of vertical integration and import substitution must not, for instance, take place in such a way as to increase the costs of the final industries for consumer and capital goods. On the contrary, the use of external economies of scale in industrial complexes should enable costs to be reduced and the industrial competitiveness increased.

This is not by any means impossible to achieve, for the industries in which these processes will take place - iron and steel products and metallurgy, pulp and paper, petrochemical products and chemical products in general - have a market large enough to guarantee the economies of scale permitted by present technology.

Greater diversification of exports is feasible by orienting industrial development in this direction. Technical progress and management capacity are already sufficiently advanced in the metal-transforming industries to provide the basis for diversification.

The efficiency of these particular industries will be increased and their costs reduced by the increasing demand for locally produced capital goods, and when the new projects for the production of intermediate goods go into operation, they will be able to accumulate large external savings in their supplies.

In the world market the price level of manufactured products which have a high labour intensity (as is the case, for instance, in many capital good items) depends on the level of internal agricultural prices which are of basic importance in determing wages.

As the protectionist agricultural policies of the large industrial countries tend to raise their internal costs, the competitive position of Argentine industry, once the necessary level of efficiency is reached, will be favourable in the long run, and will be so on the basis of an equally high internal standard of living.

In this way the comparative advantage in agriculture which Argentina now possesses will cause, if it is maintained relative to changing factors, a further comparative advantage in the industrial field.

Partly for this reason and partly from the availability of low cost of raw materials, some of the traditional industries such as textiles, if properly reorganized, and of the new industries to be developed, such as the petrochemical industry, will be able to contribute to the diversification of exports.

/This form

This form of industrial development is also consistent both with the objectives of stable growth of the product and its more equitable distribution and with the supremely important task of laying the foundations for the transformation of the Argentine economy, during the period of the 1965-1969 Plan. This will ensure the long-term development of industry in a world market where trade in manufactured products tends to grow more rapidly than that of raw materials and agricultural products.

(iii) The economic infrastructure. An adequate development of the economic infrastructure is vital if the factors of production are to achieve the targets established without the development of new bottlenecks. For the energy sector in particular the plan projects more rational use of the country's resources, and for the transport sector it proposes measures for increasing the efficiency of the provision of services and combining the different systems which exist at present.

(iv) The social infrastructure. The social infrastructure must also be adapted to the needs of a sustained and fairly rapid economic growth. In education and public health, the main problem is to improve the output of the existing systems. In particular, education needs to be capitalized and reorganized so that it can meet the increasing demand for technical personnel which will result from both agricultural and industrial development. Co-ordination of the different levels of instruction, within an over-all human resources programme, is likewise required.

Of major importance for the social infrastructure is house-building, which must grow rapidly to meet an unsatisfied and growing demand and because it is an important dynamic factor in economy and in employment. For this purpose financing and savings sources will be provided.

(d) Growth of the economic sectors

There is a considerable difference among growth rates projected by the plan for the different sectors. (See again table 10.)

The largest projected expansion is in energy production, where it is necessary for maintaining self-sufficiency in liquid fuels and preventing new bottlenecks in supply of electricity.

The next largest will be in manufacturing industry, in accordance with the high elasticity of the inflow of demand for its products, and in

/building, where

building, where it has become necessary to reactivate house building in order to meet a shortage which has increased over the years.

After these come the transport and communications sectors, vital for an efficient development of production.

The 23 per cent expansion projected for the agricultural sector will represent a considerable increase in the volume of agricultural goods per capita, and should satisfy both domestic consumption of food and industrial raw materials as well as export needs.

Lastly, the plan envisages a decline in the contribution to the gross product of trade, financial, personnel and especially government services.

(e) Use of production

The increase in the gross product envisaged in the plan should be set off against the increase in consumer demand (from the increase of per capita income and the expected rise in real wages), in investment needs and in the exports needed both to ensure the supply of imports and to make net service payments on the external debt contracted in previous years.

The annual foreign trade surplus will steadily grow in real as well as current dollar terms as a result of the increasing physical volume of exports combined with a slower upward trend in that of imports, and of better exchange terms than those of 1960. This latter will be mainly due to a rise in the prices paid for Argentine exports, which will be reinforced by the expected change in their composition.

For these reasons it is envisaged that goods and services used for consumption and internal investments will grow by about 35 per cent by 1969, which is a rate rather higher than that of the gross domestic product.

It follows that the making of large investments should be compatible with an increase of 34 per cent in total consumption and of 38 per cent in apparent family consumption, as long as the proposed policy for severely restricting government consumption expenditure is carried out. But this level of consumption would not, of course, be reached if export targets higher than the minima calculated in the balance of payments were achieved while food production did not increase beyond the projections established in the plan.

Analysis of the origin and use of goods and services (excluding government personnel services) in the first and last years of the period of the plan and comparison of the results of this with 1960 historical data bring out further details of the use of production and imports. (See table 11.)

It appears from this analysis that by improving installed capacity use in the industries of semi-finished products and of capital goods, and by pursuing an import substitution policy, the contribution of domestic production to total supply will be increased.

The type of industrial expansion projected will also involve an increase in the relative importance of production for intermediate use in the utilization of the total supply of goods and services.

As was remarked above, at the very beginning of the period there will be a fall relative to 1964 in absolute and relative inventory increases, and if goverment consumption remains constant family consumption will grow. It will then remain at practically the same level for the rest of the period which, combined with the growth of available goods and services, will make for a rise in the level of these per capita.

The plan envisages that the part of supply absorbed by gross fixed investment will slightly decrease during the period, owing to a more rapid growth of production for intermediate use. In 1960 this part was considerably larger, because, among other reasons, there was then financing in the form of a current account deficit in the balance of payments, whereas in the period of the plan there is expected to be a surplus, as a result of the policy of producing a net decrease in the countries debts.

The annual series of predictable family consumption shows an upward trend in manufactured goods in conformity with the level of income per capita achieved each year and the consequent changes in demand preferences.

By 1969 family consumption per capita will have increased by 15 per cent in the food products heading, by 30 per cent in manufactured products and by 22 per cent in the services heading. (See table 12.)

/Table 11)

Table 11

ARGENTINA: GOODS AND SERVICES AVAILABLE AND THEIR USE

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
I. Sources										
1. Gross domestic product	98.8	95.5	100.1	103.7	101.4	101.1	100.6	100.7	100.8	101.1
2. Minus: exports	9.0	7.5	11.2	12.4	10.8	9.7	9.6	9.3	9.2	9.0
3. Plus: imports	10.4	12.1	10.7	8.3	8.6	8.1	8.5	8.1	7.9	7.5
4. Adjustment, by balance of services	-0.2	-0.1	0.4	0.4	0.8	0.5	0.5	0.5	0.5	0.4
II. Goods and services available	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1. Minus inventory changes	0.7	-0.3	-1.0	-0.7	1.5	0.4	0.5	0.5	0.5	0.5
III. Goods and services used	99.3	100.3	101.0	100.7	98.5	99.6	99.5	99.5	99.5	99.5
1. Gross fixed investment	22.8	22.7	24.1	20.8	20.4	20.4	21.3	21.7	21.4	21.4
a) Building	8.8	8.6	8.9	8.6	8.4	8.4	8.9	9.2	9.2	9.1
b) Equipment and repair	14.0	14.1	15.2	12.2	12.1	12.0	12.5	12.5	12.2	12.3
2. Consumption	76.5	77.6	76.9	79.9	78.1	79.2	78.2	77.8	78.1	78.1
a) Government	8.5	8.0	8.7	8.7	8.4	7.8	7.3	7.1	6.7	6.4
b) Family	68.0	69.6	68.2	71.2	69.7	71.4	70.9	70.9	71.4	71.7

Source: National Development Plan.

/Table 12

Table 12

ARGENTINA: FLOW OF FAMILY CONSUMER GOODS

(Per capita, at 1960 prices)

Year \ Sector of origin	Food a/	Manufacturing industry	Services b/	Total
1960	12 061.7	14 220.9	7 292.3	33 574.9
1961	12 620.8	14 746.1	7 523.9	34 890.8
1962	12 706.8	12 029.1	7 446.1	32 182.0
1963	12 524.8	10 457.2	7 192.9	30 174.9
1964	-	-	-	-
1965	12 651.4	14 307.1	8 080.6	35 039.1
1966	13 060.9	15 516.2	8 280.0	36 857.1
1967	13 431.9	16 711.4	8 457.2	38 600.5
1968	13 640.1	17 630.6	8 696.6	39 967.3
1969	13 945.0	18 515.0	8 893.1	41 353.1

Source: National Development Plan.

a/ Includes those of industrial origin.

b/ Includes petroleum products.

The following are the elasticities relative to total consumption with respect to 1960: food, 0.67; manufactured products, 1.3; services, 0.94. These values are consistent with what occurred in the previous period of growth (1953-58) and with the planned growth strategy.

More detailed analysis of the projected gross fixed investment shows that its share in the product will not change significantly, though it will be somewhat lower than that of 1960-64 and higher than that of the two preceding quinquennia; but some large changes in its composition are expected. (See table 13.)

/Table 13

Table 13

ARGENTINA: PERCENTAGE COMPOSITION OF THE DOMESTIC GROSS FIXED INVESTMENT

(Percentages)

Year	Building a/	Machinery and equipment			Total
		Domestic b/	Imported	Total	
1960	38.6	38.7	22.7	61.4	100.0
1961	37.8	41.3	20.9	62.2	100.0
1962	36.8	36.8	26.4	63.2	100.0
1963	41.1	37.0	21.9	58.9	100.0
1964 c/	40.9	44.1	15.0	59.1	100.0
1965	41.1	46.3	12.6	58.9	100.0
1966	41.6	43.5	14.9	58.4	100.0
1967	42.4	42.7	14.9	57.6	100.0
1968	42.9	42.9	14.2	57.1	100.0
1969	42.5	43.9	13.6	57.5	100.0

a/ Includes agricultural buildings

b/ Includes repairs

c/ Provisional figures

One of the major changes will be the increase of building to 42 per cent of the total, which will be mainly due to the reactivation of house building, to permanent improvements in the agricultural sector and to infrastructural needs.

An even more significant change is the projected increase in the share of domestically produced machinery and equipment to almost 44 per cent of the total. In over-all terms this seems to be no more than a continuation of the historical trend of this part of the gross fixed investment, which increased from an average of 20 per cent in 1950-54 to 30 per cent in 1955-59 and to 40 per cent in 1960-64. However, two-thirds of this historical increase corresponded to the expansion of motor vehicle

/production, which

production, which had to meet a demand that had accumulated from previous years as a result of import restrictions.

During the period of the plan, the increase of domestic equipment's share will, on the contrary, result from a larger expansion of the production of other capital goods. The projections for this expansion are based on detailed analysis of the prospects of this branch of industry.

As a result of the increases in the shares of building and domestic equipment that of imports will fall to 14 per cent by the end of the period in question. This seems an unduly large drop from the 21.5 per cent registered in 1960-64, but in that period imports of capital goods were exceptionally high. If the share of imports in total investment in machinery and equipment (excluding motor vehicles) projected for 1965-69 is compared with that of 1955-59 the drop appears as from 42 to 31 per cent, which is not over-ambitious if the large expansion achieved by the capital goods industry in the intermediate years is taken into account.

Analysis of the functional destination of the gross fixed investment is hindered by lack of precise statistics.

However, the partial information which is available indicates that the projections, if fulfilled, will result in an increase in the proportion of the investment made in the economic infrastructure at the expense of that absorbed by manufacturing industry, with the share of investments in the agricultural sector remaining the same. As the total volumes will increase, these changes will not signify a reduction of investment in any sector, but only a different distribution of the annual increases. There will, therefore, be no basic structural change.

As investments in the economic infrastructure are mostly made at government charge, the share of the government and its enterprises in the total investment will grow during the period of the plan from the 20 per cent of the previous decade to 25 per cent. (See table 14.) In the latter years, after some of the urgent public investments have been made, it will begin to fall again.

/Table 14

Table 14

ARGENTINA: DOMESTIC GROSS FIXED INVESTMENT, FUNCTIONAL AND INSTITUTIONAL CLASSIFICATION FOR THE WHOLE OF THE PERIOD 1965-1969

(Millions of pesos at 1960 prices)

Functional destination	Total	Public			Private
		National	Provincial and municipal	Total	
Agriculture and fishing	223 858	7 283	1 565	8 848	215 010
Agriculture	223 278	7 283	1 565	8 848	214 430
Fishing	580	-	-	-	580
Industry and mining	240 338	49		49	240 289
a) Developing industries	128 661	49	-	49	128 612
- Mining	11 436	-	-	-	11 436
- Pulp and paper	5 248	-	-	-	5 248
- Chemical products	35 082	49	-	49	35 033
- Iron and steel	31 435	-	-	-	31 435
- Metal-transforming	25 215	-	-	-	25 215
- Other developing industries	20 245	-	-	-	20 245
b) Developed industries	111 677	-	-	-	111 677
Economic infrastructure	390 430	264 578	38 712	303 290	87 140
Energy	172 906	120 577	13 377	133 954	38 952
Transport and communications	217 524	144 001	25 335	169 336	48 188
Social infrastructure	343 786	64 960	49 818	114 778	229 008
Housing	229 008	-	-	-	229 008
Government (education, public health, sanitary works)	30 830	30 830	-	30 830	-
Other public investments	83 948	34 130	49 818	83 948	-
Not allocated	140 783	-	-	-	140 783
Total	1 339 195	336 870	90 095	426 965	912 230

Source: National Development Plan.

/Investment is

Investment in industry may be divided into that made in the already developed branches and that in the branches which are in their initial stages or are rapidly expanding. Industries of this second type, which include iron and steel, petrochemical products, pulp and paper and metal-transforming, will absorb almost half the total industrial investment. The emphasis which the plan places on the development of these basic industries, that is, on industries which transform unprocessed raw materials into intermediate product inputs for other industries or produce capital goods, will help to speed up the process of industrial integration, as was shown above. Likewise, there will be a marked increase in substitution of present imports, most of which consist of intermediate goods.

The economic infrastructure, consisting of the energy, transport and communications sectors will receive 29 per cent of gross fixed investment during the period of the plan.

Investment in the social infrastructure, which will be concentrated chiefly on house building, will account for a further 26 per cent of the total investment.

55 per cent of the gross formation of fixed capital during the plan will be allotted to the infrastructure as a whole. Of the remainder, 34 per cent will be equally divided between the agricultural and industrial sectors, and 11 per cent absorbed by production of other goods and by services.

2. The industrial development programme

Within the broad outlines which it lays down for the evolution of the economy as a whole, the National Development Plan establishes definite objectives for the industrial sector, and if they are accomplished, this sector will become one of the major dynamic forces of development. These objectives are formulated and their priorities established in a specific programme, which assigns different periods for carrying out different concrete investment projects.

Once the process of import substitutions at consumer good level is completed, the plan contemplates an industrial evolution directed primarily towards the development of the basic industries and the consolidation of capital goods production.

/This process

This process will enable domestic production to replace external supply of intermediate goods, which will be an important step towards integrating industrial processes and will smooth out the unevenness of the present development. The resulting increase of the contribution of domestic production to the supply of machinery and equipment will provide a basis on which to build up an efficient capital goods industry, and will, as an initial effect, reduce the pressure on imports merely by bringing into use installed capacity at present idle.

A dynamic evolution of this type in industry, on which the growth of the economy as a whole depends, will produce substantial changes in industry's contribution to the gross domestic product and also within the internal distribution of its value added. The plan projects an increase of the 1964 manufacturing contribution to the gross domestic product of 35.7 per cent to 39.1 per cent in 1969. This will be the result of the projected growth of the more dynamic or developing branches, whose contribution to the gross industrial product will be greater than that of the traditional activities.

The type of development programmed requires that the largest investments should be made in activities which have a high capital density per worker. This policy will not have an adverse effect on the level of employment; it has rather been chosen precisely on the basis of the estimated labour force of 1969. An industry with lower capital density would come up against the problem of a shortage of manpower, which would then become a limiting factor on progress towards the projected product growth levels.

The policy of concentrating on the development of industrial activities of high capital density per worker will also have the effect of raising the incomes of wage-earners, since these activities tend to show the largest increases in real wages.

The conditions of employment in industry will tend to alter as regards both the volume of manpower employed and the training needed to complement new techniques which will be introduced. Of the total of the employment projected for 1969, 29 per cent will be distributed among the manufacturing activities as opposed to 25 per cent at present. As regards training, greater efforts will be made to improve the training levels of the operatives and technicians.

The scale of production increases implied by the projections is large enough for all internal needs to be met, leaving in some cases surpluses of consumer goods for export. The programmed investments will strengthen the industries which have already begun to export.

The main part of the growth will take place in the developing industries, among the most important of which are pulp and paper, chemical and petrochemical products, metal-transforming and electrical, iron and steel, and mining. Their contribution to the gross manufacturing product increased from 48.3 per cent in 1960 to 53 per cent in 1964; and the Development Plan envisages that they will contribute 58.9 per cent of the value added of the sector in 1969, as a result of which the traditional activities, in spite of an absolute growth, will decrease in relative importance. (See table 15.)

The emphasis placed by the plan on the growth of the dynamic activities derives from one of its most important objectives: substitution of imports of semi-manufactures and capital goods, and the achievement of better adjusted and more coherent relations between the different branches and processes of industry, for it is these industries which provide equipment and machinery and the intermediate products widely used by industry. By carrying out the various projects already prepared the proportion of imported inputs used in production can be diminished and that of domestically manufactured capital goods in the gross fixed investment increased.

/Table 15

Table 15

ARGENTINA: PROJECTION OF THE VALUE ADDED OF MANUFACTURING INDUSTRY

(At market prices)

	Year 1964			Year 1969		
	Millions of 1960 pesos	Percentage	Index base 1960 =100	Millions of 1960 pesos	Percentage	Index base 1960 =100
Manufacturing industry	369 805	100.0	109.8	539 580	100.0	160.2
a) Developing industries	196 096	53.0	120.6	316 288	58.6	194.6
Pulp and paper	7 221	2.0	130.0	13 065	2.4	235.2
Metals (including iron and steel)	50 610	13.7	147.4	74 713	13.8	217.6
Vehicles and machinery	51 998	14.1	116.6	81 364	15.1	182.5
Electrical machinery and apparatus	13 739	3.7	93.3	29 890	5.5	203.0
Stone, glass and ceramics	11 280	3.1	98.2	17 167	3.2	149.5
Petroleum products	32 594	8.8	127.5	46 875	8.7	183.4
Chemical products	21 716	5.9	105.7	43 766	8.1	213.0
Rubber	6 937	1.2	120.4	9 445	1.8	163.9
b) Developed industries	173 708	47.0	99.6	233 292	41.4	128.1
Food and beverages	71 317	19.3	109.1	88 892	16.5	136.0
Textiles	31 549	8.5	96.1	41 585	7.7	126.7
Miscellaneous, and artisan production	70 841	19.2	93.0	92 814	17.2	121.9

Source: National Development Council (CONADE); National Development Plan.

/Table 16

Table 16 gives the probable effects on the trade balance of the implementation of the programmed projects in three basic industries. In their total investment of 625.4 million dollars imported equipment represents 334.8 million. But after the projects are carried out the new production resulting from them will replace imports of equivalent products to the value of 361.0 million dollars, that is, a sum greater than the amount of foreign exchange which will have to be spent on the initial foreign equipment. And this is not taking into account the effects that the installation of the plant will have on the domestic industrial structure, where it will enable bottlenecks in the supply of goods to be eliminated, internal costs to be reduced, etc.

Table 16

ARGENTINA: DIRECT EFFECTS OF PROJECTED INVESTMENTS IN MANUFACTURING INDUSTRY ON THE 1969 TRADE BALANCE

(In millions of dollars)

Functional destination	Investment during the quinquennium 1965-69		Imports			Relation of substitution with respect to:	
	Total	Imported equipment	Before projected investments	With projects carried out	Substitutible difference	Total investment	Imported equipment
Iron metallurgy	370.2	211.0	193.9	30.0	163.9	0.442	0.777
Pulp and paper	55.4	30.3	68.6	46.8	21.8	0.394	0.719
Chemical products	199.8	93.5	175.3	-	175.3	0.877	1.875
Total	625.4	334.8	437.8	76.8	361.0	0.577	1.078

Source: National Development Plan.

Domestic production of capital goods will increase merely through the use of productive capacity now idle; this will raise its contribution to the manufacturing gross product from the 17.8 per cent of 1964 to 20.6 per cent in 1969. Of the 774.5 million pesos (at 1960 prices) which will be invested in industrial machinery and equipment in the period 1965-69, 548.7 million will be spent on domestic and the remainder on imported products. This flow of equipment will enable the installations of some plants to be renewed, will improve technological levels and will eliminate present maladjustments between complexes and processes. It will also provide a large part of the equipment of new establishments which are to be installed in the next few years in both developed and developing branches.

In order to stimulate the growth of the basic industries a large proportion of investments will be made in them. The projected distribution of investments in industry during the period of the plan is: 53.5 per cent in the developing and 46.5 per cent in the developed industries, and as regards investments in factory buildings in particular by far the greater proportion will be made in the former and only 18.6 per cent in the latter. This gives some idea of the importance of new installations in the projected investments.

The investments of the period 1965-69 will amount to 1,339 thousand million 1960 pesos; 57.8 per cent will be spent on machinery and equipment, of which 24.3 per cent on purchases from foreign suppliers and the rest on domestic products. Nearly the whole of the remainder, amounting to 564.7 thousand million pesos, will be absorbed by industrial buildings and installations, which will be entirely provided by domestic supply.

Another feature of the programmed development is the establishment of activities which mobilise unused natural resources. Most of these new activities will be coordinated with industrial projects already being carried out in regions of the country which need special stimuli. Rational study of the means and consequences of establishing different production and service activities, as have been made in the fields of metal-transforming, cellulose pulps, wood, etc., will tend to encourage the establishment and growth of regional poles of development.

/If the

If the objectives proposed in the plan are achieved, Argentina will be well on the way to having an integrated and autonomous growth only limited by the growth rate of final demand and the capacity to accumulate. The expansion of the domestic market, on which this development will depend, is related to the achievement of higher income levels for the majority of the population and to vigorous development of the regional economies. The importance of this last factor is such that it may be necessary to make much greater efforts towards establishing the strategically placed industrial nuclei which can stimulate local projects and exploit potential material and human resources.

To ensure that the proposed targets are reached, the plan provides for means of channelling the efforts which will be made to carry out the investments projected for the basic sectors. They will be governed by a coherent policy, which will help concrete projects aimed at definite objectives to be carried out through the following specific programmes: (a) conservation and maximized use of natural resources; (b) support for the equipment of the infrastructure; (c) support for the equipment and technical development of the rural environment, and (d) the import substitution plan.

3. Production and investment targets in the main sectors of industry

The production targets for the different activities and their investment needs were determined in the Plan in conformity with the basic criteria for orienting industrial growth stated above.

(a) Textiles

The Argentine textile industry has production capacity capable of supplying domestic needs in the whole range of articles for which there is demand.

The consumption figures projected for 1965-1969 do not involve large increases of this capacity. (See table 17.)

/Table 17

Table 17

ARGENTINA: PROBABLE CONSUMPTION OF FIBRES IN 1967

(Physical volume and its relations a/)

Fibre	Tons	Kilogrammes per capita	Percentage of the total
Cotton	135 000	5.613	68.30
Washed wool	34 000	1.400	17.03
Artificial b/	15 000	0.623	7.58
Synthetic c/	14 000	0.582	7.08
Total	198 000	8.218	100.00

Source: National Development Plan.

a/ Physical volume of cotton fibre at constant count Ne = 17.1.

b/ Excluding high-tenacity rayon.

c/ Excluding high-tenacity nylon.

The National Development Plan does not recommend encouraging the installation of new textile plants and the expansion of existing ones. New equipment should only be installed where it is needed to compensate a lack of balance in productive processes or to replace obsolete groups of machinery which are not suited for use in co-ordination with other existing machinery, or to incorporate modern auxiliary elements into production. In the latter connexion it is recommended that laboratory and control of quality apparatus and elements should be incorporated in order to improve the technical levels and efficiency of the industry.

Projected investment in machinery for 1965-1969 is 31.5 million dollars, 22.5 in the cotton sector, 6.5 million in the wool sector and 2.5 million in the artificial and synthetic fibres sector (spinning and wearing of cut fibre). Table 18 gives a more detailed analysis of this investment in equipment.

/Table 18

Table 18

ARGENTINA: PROJECTED INVESTMENTS IN TEXTILE MACHINERY FOR 1965-1969

(In millions of dollars)

A. **Cotton**	
Renewal of 150 000 spinning machines, comprising spinning frames, manual roving frames, combs, cards, opening and cleaning machines, cone winders, and twisters	15.0
Renewal of 1 600 looms, including ring, warping and tying-in machines, etc.	4.5
Renewal of fabric dyeing and finishing machinery	1.0
Spare parts, tools for air-conditioning and cleaning installations, laboratory apparatus, etc.	2.0
Sub-total	22.5
B. **Wool**	
Supplementation of earlier re-equipments for combed wool, including spinning frames, preparing and combing machinery, splicing fingers, and twisters, etc.	1.0
Renewal of 10 000 carded wool spindles, including spinning frames, cards and semi-combed units.	2.0
Renewal of 500 looms with auxiliary machines, such as magazines, warpers, etc.	2.0
Renewal of dyeing and sizing machinery	0.3
Spare parts, tools for air-conditioning installations, laboratory apparatus, etc.	0.7
Sub-total	6.5
C. **Artificial and synthetic (spinning and weaving of cut fibre)**	
Import of equipment where renewal of existing equipment is needed. Spare parts and additional units	2.5
Total investment in equipment	31.5

Source: National Development Council (CONADE).

/Given the

Given the limited size of the projected investments in textile re-equipment, they should be made preferentially in the establishments which can make best use of them, that is, those whose organization would enable them to obtain the highest productive outputs from the combination of the other factors of production.

The existence of a considerable number of establishments whose outputs do not reach the standards made possible by the diffusion of modern technologies suggests that the State should adopt measures, through a policy of selective bans, for encouraging entrepreneurs to adapt their establishments to modern systems of industrial organization.

Raw materials account for a considerable part of the cost of textile products. Although Argentina produces the raw materials needed by the natural and artificial fibre industries, problems have arisen in the case of some of them which hinder the development of the industry. The slight decline in the volume and quality of domestic cotton production constitutes an important problem for the cotton textile industry, which will have to continue to depend on imports of long fibre for production of better quality articles.

(b) Capital goods

The targets for future inflows of machinery and equipment were determined on the basis of the principle of obtaining progressively greater use of the installed capacity of the domestic capital goods industry.

Full use of existing capacity will increase domestic production of industrial equipment; but some products needed, whose complexity, quality or size makes their production by domestic industry unjustifiable or for which domestic establishments are unable to fulfil the delivery schedules, will still have to be imported.

According to the estimated capacities for supply, the growths in the value of domestic production can be achieved without any large investments having to be made in most of the headings concerned during the first years of the period. The process will have to be brought about by means of an increase in the vertical integration of the industries manufacturing machinery and equipment, resulting in progressive substitution of imports.

Better use of domestic industry's potential production capacity, besides providing the benefits mentioned above, will contribute to a number of objectives, among which are the following:

(i) Higher level of manpower employment.

(ii) More stable and regular demand and, consequently,

(iii) A general increase of productivity, and

(iv) Reduced costs.

Since over the course of time the inventory will come to be increasingly composed of domestic equipment, one important effect of the increase of purchases from domestic industry, in addition to the direct contribution to the balance of payments, will be the substitution of imports of parts and spare parts.

The projection given in table 19 shows just how the growing demand for machinery and equipment of the period will come to be mainly satisfied by domestic production.

Thus, by 1969 Argentine industry will contribute 67 per cent of the total needed, which compares favourably with the 50 per cent of 1962.

The increase of domestic manufacture of equipment measured in absolute terms is still more significant. The estimated total of 1969 - almost 52,000 million 1960 pesos - more than doubles that for 1962.

70 per cent of domestic industry's contribution in 1969 will be absorbed by agricultural mechanization, equipment for transport services, energy and fuels. Thus, for example, in that year the dockyards will deliver about 70,000 tons of ships of large tonnage.[1]

The growth of the machine-tool industry is worth special mention, not so much because of the absolute value of its production - estimated at about 3,000 million 1960 pesos in 1969 - but rather because of the contribution it will make towards an increase in efficiency throughout the metal-transforming industry.

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[1] These remarks will be developed below in the passages on support for the equipment of the infrastructure and support for the equipment and technical development of the rural environment.

/Table 19

Table 19

ARGENTINA: PROJECTION OF DEMAND FOR CAPITAL GOODS

(In millions of 1960 Argentine pesos)

Origin	1962			1969		
	Domestic	Imported	Total	Domestic	Imported	Total
Machine-tools	1 070	2 360	3 430	2 929	1 374	4 303
Primary motors	574	596	1 170	1 134	1 934	3 068
Electrical machinery	3 487	1 557	5 044	9 025	4 082	13 107
Measuring and control apparatus	467	686	1 153	529	241	770
Pumps and compressors	673	664	1 337	905	1 013	1 918
Universal industrial equipment	1 272	50	1 322	2 627	401	3 028
Data-processing equipment	181	977	1 158	636	2 123	2 759
Moving equipment	1 245	2 757	4 002	2 506	2 415	4 921
Tractors and agricultural machinery	11 376	515	11 891	18 177	7	18 184
Transport equipment (railway, shipping, air)	1 779	7 038	8 817	7 932	2 763	10 695
Equipment for the steel industry	-	1 482	1 482	258	2 674	2 932
Equipment for the petroleum, chemical and petrochemical industries	468	141	609	3 562	2 257	5 819
Equipment for other developing industries	360	1 292	1 652	562	2 733	3 295
Equipment for traditional industries	1 271	3 941	5 212	1 079	1 135	2 214
Total	24 223	24 056	48 279	51 862	25 152	77 014

Source: National Development Council (CONADE), National Develoment Plan 1965-1969.

The process of securing the domestic market will put the industry in a better position from which to tackle the prospects open to it in the region covered by the Latin American Free Trade Association (ALALC) and in the developing countries of Asia and Africa. Its entry into these markets should be backed up by export financing and publicity campaigns in foreign countries (jointly organized by public and private organizations) and, as regards ALALC, by making full use of the different machinery envisaged - complementarity agreements, negotiation of lists, etc.

(c) Iron and steel

From the targets envisaged by the National Development Plan for the different steel-consuming sectors of the economy, consumption of iron and steel products, expressed in terms of gross steel, is estimated at almost 4,000,000 tons in 1969.

The future evolution of steel consumption has been studied, as can be seen in table 20, on the basis of demand for the following products:

(i) Flat products. This heading comprises consumption of hot- and cold-rolled flat plates, skelps and tin plate. It has been calculated primarily on the basis of the total supply of demand for flat plates and of the new production which will result when the tin plate mill of the Argentine Mixed Steel Corporation (SOMISA) is put into operation. Thus, consumption is expected to grow by 99.8 per cent as between 1962 and 1969, or from 551.8 thousand to 1,102.5 thousand tons.

(ii) Non-flat products. This comprises consumption of shapes of all types, iron round bars, rails, wire rod and miscellaneous pieces. It will increase by 97.3 per cent as between 1962 and 1969, or from 603.2 thousand tons to 1,190.1 thousand. The largest growth is expected to be in rails, the whole demand for which, reading 100.0 thousand tons/year from 1967 onwards, is to be supplied by the rail mill installed in the SOMISA plant. Wire rod will also grow considerably; its consumption is expected to reach 255.5 thousand tons in 1969 as against 169.0 thousand in 1962, with possible surpluses of production for export.

/Table 20

Table 20

ARGENTINA: PROJECTION OF DEMAND FOR PRIMARY IRON AND STEEL PRODUCTS

(In thousands of tons)

Headings	1962	1969
A. Production		
Pig iron	396.4	2 421.0
Steel ingots	644.5	3 100.0
Final rolled products	760.7	2 432.3
(1) Flat		
Flatsheets	34.7	720.0
Skelps	78.1	141.8
Tin plate	-	130.0
(2) Non-flat		
Shapes	90.5	440.9
Rails	-	100.0
Wire rod	171.7	255.5
Round bars	312.5	353.0
Miscellaneous pieces	83.9	40.7
(3) Seamless tubes	89.3	142.0
(4) Increase for inventory purposes	-	108.4
Wrought products	45.0	69.3
Cast products	146.2	344.2
B. Total demand (expressed in thousands of tons of gross steel)	1 936.1	3 989.8

Source: National Development Council (CONADE), National Development Plan 1965-1969.

/(iii) Seamless

(iii) Seamless tubes. Demand is expected to grow by 58.9 per cent as between 1962 and 1969, or from 91.2 thousand to 145.0 thousand tons. Changes may occur in this item as a result of changes in the productivity of the petroleum wells, which would mean that a different number of wells was needed, and of more widespread use of tubes for other commercial purposes. Exports of this product (as also of wire rod) have already reached a considerable volume.

(iv) Casting and forging. From the targets established for the consuming industries, a change in demand is expected to occur in the future development of this heading: by 1969 it will have grown by 115.0 per cent for casting (to 344.2 thousand tons) and by 52.0 per cent for forging (to 69.3 thousand tons).

The estimated investments to be made in the three stages of production (blast furnaces, steel furnaces and rolling mills) given in table 21 are derived from the projection of demand and the plans for the production needed to meet it. These investments should be directed primarily towards integrating the productive process and towards increasing the domestic contribution to the supply of special and high quality products.

There are large-scale public and private projects for increasing integration of the iron and steel sector, of which priority has been given to that for establishing a second blast furnace and increasing steel furnace capacity to 2 million tons in the state enterprise, SOMISA.

Apart from this first priority project the demand structure allows room for a further capacity of one million tons of steel ingots. The work of installing this should begin immediately if the supply of the domestic market is not to be restricted by a shortage of semi-manufactures. There are important private projects for meeting these targets.

/Table 21

Table 21

ARGENTINA: TARGETS FOR THE IRON AND STEEL INDUSTRY, 1969

Stage of production	Demand (thousand tons)	Effective installed capacity (thousand tons)	Domestic production (thousand tons)	Imports		Exports		Estimate of imports to be made if no increases are made on 1964 capacity		Description of the projects included in the plan	Current investments		
				Thousand tons	Million dollars	Million tons	Million dollars	Million tons	Million dollars		Millions of 1960 pesos	Million dollars	General total in million dollars
1. Blast furnaces	2 421	2 421	2 421	-	-	-	-	132	6	Expansion of the SOMISA plant to a capacity of 2 million tons. Two integral plants one in operation, the other being installed. Two new steel furnaces and two expansions in small-scale semi-integrated plants			
2. Steel furnaces	3 100	3 151	3 100	-	-	-	-	1 687a/	172				
3. Rolling	2 546	3 109	2 432	114	30	100b/	11	113	30				
4. Casting	544	450	544	-	-		-	-	-				
Totals					30		11		208		16 490	211	370

Source: National Development Council (CONADE), National Development Plan.

a/ Its equivalent in semi-products.

b/ Eventually, seamless tubes, wire, welded pipes.

However, the plan also takes into account the growth of demand over a longer term, from which it appears that by 1971-72 a new integrated plant will be needed. Since this type of investment needs a long period to mature, work on installing the plant will have to begin in 1966 if supply is to meet subsequent demand for iron and steel products.

To avoid waste of resources these investments must involve suitable co-ordination between the efforts of the public and private sectors, and the temporal order in which the new plants are installed and put into operation and additional installations made in existing plants must be carefully calculated.

Investments for increased specialization are covered by a group of projects concerned with the production of high quality and special steels. In some cases these involve expansions of firms already operating successfully in this activity and in others, the installation of new plants has been encouraged by the remarkable growth of domestic demand for this type of products. Only specialization and the achievement of products whose quality is more or less equal to those now imported can justify the installation of these plants. The individual capacity of these plants should reach roughly 100.0 thousand tons by 1969. It is a reasonable estimate that the market for these products will amount to about 8 per cent of the projected consumption, that is, to about 300.0 thousand tons, which is the target envisaged by the projects.

Apart from the need for increasing integration and improving quality in production as a whole, there is that of renewing some of the installations now in use - about 350 thousand tons - especially at the rolling stage and in some of the small-scale private steel works.

(d) Non-ferrous metals

According to the estimates of the National Development Plan the programme for the production of non-ferrous metals will not be substantially altered during 1965-69 in respect of the supply of ores and metal ingots.

Thus, demand for lead and zinc will be met by domestic production, while that for aluminium, copper and tin will continue to depend on imports.

However, micrometallurgic processes will be established for copper, enabling a small percentage of consumption to be supplied from domestic

/production. It

production. It is also possible that towards the end of the period 1965-69 a project for exploiting aluminium ore will materialize.

In addition to this, some changes in demand are expected during this period.

A major change will consist in the large growth in the demand for tin as soon as SOMISA's tin plate mill comes into operation.

Because of its use in electric accumulators the projected growth of the motor vehicle inventory will expand and alter the structure of demand for lead.

Zinc and copper consumption will increase, mainly because of the growth of domestic production of equipment, parts and semi-products using alloys.

Table 22 shows the projected physical volumes of demand for 1969.

Table 22

ARGENTINA: PROJECTION OF DEMAND FOR NON-FERROUS METALS

(Tons)

Metal	Annual average 1958-63	Projection for 1969
Lead	29 200	41 400
Zinc	20 600	27 000
Aluminium	17 400	31 800
Copper	24 200	50 000
Tin	1 700	10 400

Source: National Development Council (CONADE), National Development Plan 1965-1969.

(e) Chemical industries

The expansion of the chemical sector will take place primarily as a result of development in the petrochemical, sodium alkali and main acids branches. This will change the production structure of the sector by making the contribution of intermediate products - the main inputs of the industry - larger than that of final goods.

At the same time the substitution of imports of basic products will b rapidly extended as obsolete processes are replaced by modern ones, as a result of which costs will fall.

The increase of installed capacity in the above headings will keep pa with the needs of the domestic market and will enable exports to be made in future.

Efforts will be made to ensure that the installation of petrochemical projects will be carried out in accordance with the needs for vertical integration of the productive process.

The installation of ethylene and benzene plants will be encouraged to meet the demand of the industries producing plastics, man-made fibres, synthetic rubber, etc., which now use imported raw materials.

The installation of fertilizer plants with a capacity of at least 150,000 tons/year will also be encouraged, in order to meet a domestic dema which has so far not been satisfied. This will create favourable condition for technological improvements in agriculture and thus result in an increas in yields per hectare farmed.

A demand of about 125,000 tons a year of caustic soda will have to be met by the end of the period. The Solvay soda (sodium carbonate) productic will have to reach 150,000 tons a year to substitute imports in this headin

It is estimated that demand for sulphuric acid will reach 300,000 ton a year, which will be covered by complementary projects in the fertilizer plants.

On the basis of the present technological development and installed capacity of the rubber industry and of the degree to which synthetic rubbe is already substituting natural rubber, a demand of 38,000 tons of syntheti rubber, mostly S-BR (styrene-butadiene) and special modern rubbers, is projected for 1969. This can be complied with when the project for a benze and styrene complex now being carried out is finished.

In relation to the estimated demands of the rubber and other consumin sectors, consumption of lampblack will reach about 15,250 tons a year. Moreover, considering its present exports to ALALC countries and their pos increase, an increment in present installed capacity should be encouraged, step with the development of those sources of demand.

The installation of plants for the following thermochemicals will be furthered: polyvinyl chloride (PVC), 35,000 tons a year, polyethylene, 24,000 tons a year and polystyrene, 16,000 tons a year.

The investment needs of these and other equally important projects during 1965-69 are given in table 23. They will amount to 199.9 million dollars, of which 93.5 will be spent on imported material and equipment and 46.2 millions on purchases in the domestic market; the remainder will be absorbed by the assembly of the installations, civil works and engineering of the projects.

(f) Pulp and paper

The plan envisages that practically all projects in connexion with pulp and paper should be aimed at vertical integration of the productive process through use of existing natural resources. For this reason, support will be given to all schemes which when developed as concrete projects tend to involve the establishment of integrated plants in regions where suitable woods are available and which have high forest yields; as well as encouraging foreign exchange, these will cause favourable changes in the primary sector. This principle will also be extended to enterprises already operating in the final stages of paper and paperboard manufacture which vertically integrate their processes.

The programmed substitution embraces practically all semi-products (leaving a gap in long-fibre chemical pulp and mechanical pulp) and all final goods except newsprint and some special types of paper, for which the domestic market is too small to make production economic.

In this latter heading, however, feasibility studies will be made of the expediency of installing in the country newsprint plants capable of providing part of domestic supply.

The projected growth rate of the whole pulp and paper sector as derived from the estimated investments in new plants and expansion and the degree of use of installed capacity (about 80 per cent in paper and paperboard and 90 per cent in cellulose pulp production) is high - nearly 8 per cent a year cumulative.

/Table 23

Table 23

ARGENTINA: PROJECTS FOR THE CHEMICAL INDUSTRY FOR 1965-1969

Products for which projects have been prepared	Projects		Total domestic installed capacity 1969 (tons/year)	Total investments 1965/1969 (million dollars)	Imports in 1969 if th projects were not carried ou (million dollars)
	Number of plants	Capacity to be installed (tons/year)			
Ethylene	2	26 000	58 000	14.83	-
Caustic soda	1	40 000	120 000	14.00	9.20
Solvay soda	2	160 000	160 000	-	-
Sulphuric acid	2	100 000	334 000	-	-
Fertilizers (in nitrogen tons)	2	180 000	185 000	66.00	45.21
Synthetic rubber	1	10 000	47 500	15.00	20.39
Nitric acid	1	26 500	-	-	-
Lamp black	1	15 000	30 000	2.00	2.55
Methanol	2	16 500	45 000	6.67	5.80
Phenol	1	10 000	32 000	0.43	1.98
Acetic acid	1	4 800	10 000	2.86	0.83
D.D.T.	1	1 100	2 100	0.21	1.75
Ester 2-4-D	1	600	-	0.38	1.06
Styrene	1	18 000	18 000	-	5.27
Butadiene			32 000		
Polyethylene	1	11 000	36 000	-	5.25
Polystyrene	2	11 000	17 000	0.24	7.61
P.V.C.	3	42 500	57 500	26.00	19.20
Polypropylene	1	7 000	7 000	10.00	3.32
Polyester	1	3 100	8 600	3.60	7.05
Dimethylterephthalate	1	6 000	6 000	4.00	2.70
Nylon moulding powders	1	10 000	18 000	38.00	19.93
Caprolactam	1	10 000	-	1.58	4.57
Plasticizers	1	2 850	5 000	0.32	2.08
Isopropanol	2	20 000	20 000	7.10	1.77
Sec-butyl acetate	1	4 000	4 000	-	5.68
Acetone	1	10 800	13 900	-	-
Mek	1	3 600	3 600	-	-
Mibk and Mibc	1	3 000	3 000	-	-
Urea formaldehyde resin	1	4 000	-	0.07	1.84
Polyvinyl acetate	1	1 200	-	0.03	0.49
Total	32	773 810		139.88	175.30

Source: National Development Council and National Department of Industry.

/The projected

The projected investments for 1965-1969 amount to about 55.4 million dollars. 23.2 millions of this will be used in projects for long-fibre chemical pulp production, the domestic demand for which is estimated at 106,200 tons for 1969. As domestic production will rise from 24,000 to 75,000 tons, there will be a deficit of 31,200 tons which will serve to maintain trade within the ALALC market. The rest of the projected net investment - 32.2 million dollars - will be used to install short-fibre and semi-chemical pulp plants, which will make up for the deficit in mechanical pulps.

These large investments are justified by comparing them with the sums required for the imports which have to be made if the projects were not carried out. In accordance with the projected demand for 1969 these imports would amount to 68.6 million dollars, while the proposed investments do not amount to more than 55.4 millions. Apart from this there will be the effects of the installation of the plants in the rest of the industrial sector and the changes which will be created in the regional economies. The investments will represent an annual savings in foreign exchange of about 22 million dollars. (See table 24.)

The evolution of this highly dynamic sector will be manifest in increases in the installed capacity of the plants producing industrial paper (pure Kraft and Kraft-type, packing paper in general and paperboard for export packing). This will raise the annual volume of production in the heading paper, paperboard and Bristol board to 698,000 tons and will provide for the normal needs of the domestic market.

The National Development Plan specifies that new projects should be selected on the principle that a larger supply should be achieved by increasing the number rather than the normal sizes of the plants. This would prevent the development of monopolytic supply structures which can distort the market and the price structure. Incentive measures should be particularly aimed at strengthening enterprises in which producers and consumers are associated and at stimulating the regional economies.

/Table 24

Table 24

ARGENTINA: PULP AND PAPER INDUSTRY, TARGETS FOR 1969

Sectors	Internal demand (tons)	Installed capacity (tons)	Domestic production (tons)	Imports		Exports	Estimated investments 1965-69 a/			Number of projects	Imports needed if investment projects are not carried out	
				Tons	Thousands 1960 US$		Domestic (millions A. pesos of 1960)	Imported (thousands 1960 US$)	Total (millions A.pesos of 1960)		Tons	Thousands 1960 US$
Pulp and paper												
Newsprint	241 500	21 000	15 000	226 500	36 200	-	-	-	-	-	226 500	36 200
Paper, Bristol board and paperboard b/	539 800	698 000	529 800	10 000	1 600	-	-	-	-	-	27 700	4 400
Total for paper	781 300	719 000	544 800	236 500	37 800	-	-	-	-	-	254 200	40 600
Long-fibre chemical pulp	106 200	75 000	67 500	38 700	4 800	-	793	13 692	1 927	2	84 600	10 600
Short-fibre chemical and semi-chemical pulp	229 200	289 200	260 300	-	-	-	1 280	16 565	2 651	8	103 000	12 900
Mechanical pulp	64 100	34 000	30 600	33 500	4 200	-	9	18	11	1	35 800	4 500
Total for pulp	399 500	398 200	358 400	72 200	9 000	-					223 400	28 000
Use of waste paper	183 100	-	-	-	-						-	-
Totals	-	-	-	308 700	46 800	-	2 082	30 275	4 589	11	477 600	68 600

Source: National Development Council (CONADE), National Development Plan, 1965-69.

a/ Investments in pulp and paper are calculated on an overall basis according to the type of pulp to be produced. Replacement investments are not included.

b/ Excluding newsprint.

/(g) The

(g) The motor-vehicle industry

The plan estimates that motor vehicle production in the country should grow at a cumulative annual rate of 6.0 per cent during 1965/69, which represents an addition of 972,500 units to the existing inventory. The projection of this increase envisages that 71 per cent of it will consist of tourist vehicles (motor cars and station wagons), 23 per cent of pick-ups and vans and the remaining 6 per cent of lorries and chassis which will be subsequently provided with coachwork so as to become freight and passenger transport units.

The probable annual demand levels have been determined on the basis of different considerations, according to the development of demand in each of the major established categories: tourist vehicles and utility vehicles.

The projections for tourist vehicles were based on the volume of family purchases of these goods. The relation between this volume and the total volume of private consumption in 1962 and 1964 - considered normal years but showing the higher levels reached in the last few years by this growing section of consumption - will remain the same during 1965-69, i.e., at roughly 5.17 per cent.

Because of the enormous importance which motor vehicle purchases assume among consumer units and the obvious resulting distortion of the use of savings, it is vital that demand for these goods should be kept within certain limits in order that the country's resources can be used for other productive activities which are more valuable for the development process.

A different principle was used in determining the projections for utility vehicles, since these goods normally supply the emergent needs of freight and passenger transport in private and state activity. For this reason, they were based on the needs for transport material which would result from rational use of the different types of services. It was thus estimated that demand for lorries will grow by 8.7 per cent a year and that for the other vehicles of this category by 2.5 per cent.

These considerations give the following projection of demand for motor vehicles in 1969, as envisaged by the National Development Plan:

Tourist vehicles	-	153 000	units
Pick-ups and vans	-	47 800	"
Lorries and chassis	-	14 100	"
Total		214 900	units

Production of parts, assembly units and raw materials of domestic origin will increase up to the highest possible degree of substitution of their present imports, which represent an excessive drain on the balance of payments. The increase in the proportion of purchases of domestic products will have its recognised effect of an expansion of the final-product industry. This will in turn result in an increase in the specialization, rationalization and levels of technical training of the subsidiary industrie and in a reduction of internal costs.

The integration process, already far advanced at the level of the final-products industry, should continue, in particular by incorporating int production certain strategic materials, such as flat, pressed and other steel products, for which installed capacity already exists in the country. This will make for optimum use of equipment and for lower costs.

A progressive increase in use of inputs of domestic origin will also have effects on employment.

The targets proposed by the plan are based on the assumption that supply will be directed solely towards the domestic market, aiming at total substitution of imports of finished vehicles. However, complementarity agreements with neighbouring countries or other members of ALALC might enable exports of these products to be made, which would result in more intensive use of present factory capacity, in incentives for the subsidiary industries and in other indirect benefits.

(h) Durable consumer goods

The National Development Plan estimates that consumption of durable consumer goods will increase by 13.5 per cent a year cumulative. In preparing this projection, the basic factors of analysis used were income elasticity, the existing inventory of each good, replacement needs for each good in accordance with the length of its useful life, the relative saturation of the market, the marriage rate and the number of square metres covered that it is projected to manufacture.

/As was

As was said above, 75 to 80 per cent of the total of durable consumer goods produced consist of refrigerators, washing machines, cooking stoves, sewing machines, and television sets.

On an over-all view of the sector, the remarkable growth of the television sets heading becomes apparent. Its rapid expansion from 1956 onwards eclipsed the traditional pre-eminence of other articles such as refrigerators, cooking stoves and washing machines. In 1960 these three latter goods together represented 39 per cent of the total, while television sets alone represented 37.9 per cent. The rate of change of its future demand largely depends on whether or not new television channels are installed in the interior of the country. When all present projects have been carried out production will amount to nearly 400,000 sets in 1969, a volume which will represent no less than 50 per cent of the total for durable consumer goods. But this would imply that family consumption will be channelled towards purchasing this type of good to an extent by no means commendable in view of present income levels.

For this reason new channels will not be installed in regions where the concentration of population does not justify them. Nevertheless, it is envisaged that an extensive television network will be set up which will create an additional demand of no less than 300,000 units during 1965/69. A similar number will be needed for replacement purposes, and an estimated 480,000 in all will be demanded by new users.

The projection for refrigerators, cooking stoves and washing machines took into account their elasticity in relation to family consumption, which accounts for 70 per cent of the national income.

The expansion of refrigerator consumption, like that of television sets, depends on the relation between the stock of housing having electric power installations and the proportion of it in which these goods have been installed.

Absorption refrigerators will continue to constitute between 15 and 20 per cent of the total produced.

As regards cooking stoves, a considerable proportion of demand will derive from the replacement of kerosene by gas stoves. It is likely that this process will be most marked in the interior of the country, where natural and liquified gas have recently begun to be used intensively. This, together with a continual growth of the number of square metres covered, will result in a cumulative annual increase of 15.1 per cent.

It is envisaged that domestic production will supply some parts now imported, particularly the steel flat plates which form inputs used in the production of the more important goods.

Since present installed capacity can in most cases absorb production increases, until 1969 investments in factory plants will be limited to the sums needed for replacing existing machinery. (See table 25.)

Table 25

ARGENTINA: PROJECTION OF DEMAND FOR DURABLE CONSUMER GOODS

(In units and millions of 1960 Argentine pesos)

Year Goods	1964		1969	
	Units	Millions of 1960 pesos	Units	Millions of 1960 pesos
Refrigerators	141 013	3 702	263 982	6 929
Washing machines	112 600	1 187	272 000	2 872
Cooking stoves	237 767	1 492	445 311	2 793
Sewing machines	61 888	383	163 292	1 012
Television sets	150 000	5 800	290 000	11 600
Rest of the sector	-	4 800	-	8 560
Total		17 364		33 766

Source: National Development Council (CONADE), National Development Plan 1965-69.

4. Specific programmes

The demand and production targets outlined above will be integrated into the economy as a whole by carrying out specific programmes, giving rise to concrete projects, whose final objectives are compatible with the general design laid down in preparing the macro-economic projections of the National Development Plan.

These programmes were defined by the plan as follows:

(a) Conservation and maximized use of natural resources;

(b) Support for the equipment of the infrastructure;

(c) Support for the equipment and technical development of the rural environment;

(d) Import substitution plan.

(a) Conservation and maximized use of natural resources

This programme, perhaps the most important for industry, consists of three parts which cover parallel lines of development. The results of this programme will be the utilization of hitherto unused primary resources, the improvement of costs structure of final goods production, and owing to the substitution of imported products which it implies, pressure on the trade balance will be reduced.

Its implementation will require joint action on the part of the primary and manufacturing sectors. Its three parts cover the development of the following primary-manufacturing complexes:

(i) Mining-metallurgy;

(ii) Petrochemical;

(iii) Forests - wood - pulp and paper.

(i) The mining-metallurgy complex. The rapid growth of the metal-transforming industry means that high priority must be given to the development of all the sectors from which its main inputs derive.

The short supply of raw materials or intermediate goods indispensable for productive processes has resulted in a series of bottlenecks or lack of balance in production which it is vital to overcome. The most acute problems of supply have occurred in respect to the inputs of the ferrous and non-ferrous metal industries.

As regards iron, a fundamental factor will be the development of known deposits, which should be capable of supplying nearly 30 per cent of the estimated ore needs of the end of the period 1965/69.

The programmed composition of supply, expressed in gross terms, is as follows: 900,000 tons from the Sierra Grande deposits, 150,000 tons from the Zapla river basin deposits, and 60,000 tons from the Misiones and Salta regions.

/The most

The most important advance in this field will be made when the project for exploiting the Sierra Grande deposits comes into operation. Its first stage, which will bring 600,000 tons a year of nodulised (pallet) ore to the market, should be finished by 1969.

Lastly, the ore deposits of the Salto-Jujeña region (Unchimé and Santa Barbara) and the small deposits of the province of Misiones, which would be oriented primarily towards supplying pig iron for the steel foundries, may be exploited in future.

Parallel to the development of iron ore, projects for exploiting manganese ores will be encouraged in order to achieve a balanced development of the steel industry. These will enable present capacity to be increased to about 180,000 tons by 1969. The feasibility study of one of them - for the Agua de Dionisio deposit (Farellón Negro) in Catamarca province - which will provide 30,000 tons a year of 42-44 per cent manganese and, eventually, ferromanganese concentrates, is now in its final stages. 20,000 tons a year of ferromanganese and other ferro-alloys will be needed for the steel industry for a full vertical integration of its productive process.

At the same time, projects for the economic exploitation of the country's dolomite and fluorite deposits will be carried out, thus fulfilling industry's present needs.

In the field of non-ferrous metallurgy there will be large increases in demand for aluminium, lead and zinc and a smaller increase in that for tungsten. Argentina possesses sufficient resources to meet this, though in some cases, as in aluminium and tungsten, it has been backward in exploiting them.

With regard to aluminium, projects for exploiting the known raw material deposits - alunites in Camarones, laterites in Misiones and/or the high aluminium content clays of Patagonia - will be carried out.

As regards tungsten, the installation of a concentrating plant in San Luis and the later addition of a metallurgic plant for producing carbons, alloys and rolled products will make its future exploitation profitable. At the moment the fall in international prices of this strategic mineral has almost paralyzed activity in the existing mines. Production of tungsten compounds, alloys and rolled products will enable the needs of the domestic market to be satisfied, leaving considerable surpluses for sale in already secured international markets.

(ii) Petrochemicals. As regards its natural resources the petrochemical industry by definition basically uses natural gas and petroleum (breakdown and products). Argentina's large natural gas reserves, far-reaching network of gas and oil pipelines and considerable installed capacity for petroleum processing put it in a position to bring about a dynamic development of this branch.

The incidence of the industry's demand for these inputs (approximately 4 per cent of estimated domestic production of natural gas in 1969) will remain too small to have a distorting effect on supply, but refinery gas, where its consumption will fluctuate around 20 per cent of projected domestic production, will have to some extent to be subject to a system of planned distribution between the different consuming sectors.

The main effects of increasing use of these natural resources will be vertical integration of productive processes, import substitution, a faster rate of change in technological processes and in consequence lower production costs.

The development of this branch will increase domestic supply of the raw materials and intermediate products needed by the plastics, fertilisers, man-made fibres (for textile yarns), synthetic rubber industries, etc.

It has also now given rise to a group of projects for a number of plants to be installed near the petroleum refineries and gas pipeline terminals. These cover production of ammonia, methanol and propylene - raw materials used in manufacturing all the intermediate inputs needed by the refineries - for which 8 new plants and 11 expansions will be needed.

(iii) Forests - wood - pulp and paper. Due to existing natural resources and the suitability for afforestation of enormous expanses of Argentina, it is possible for the forest sector - if provided with appropriate promotional incentives - to participate more actively in supplying the needs of the pulp and paper and building industries.

The plan implies targets and an investment programme for the development of this sector which can bring about a powerful stimulus as well as induced effects on the primary sector. Moreover, a reduction of imports of wood for building purposes and of cellulose pulps can be expected.

/The investments

The investments in pulp and paper projected for 1965/69 in conformity with the objectives just mentioned will be made through a number of projects, whose legal arrangements and study are already far advanced.

A plant producing long-fibre chemical pulp and industrial paper of a production capacity of 100 tons a day will be installed in the province of Misiones. This province was chosen because it provides ideal conditions from the point of view of the supply of the basic raw material, conifer wood.

The same types of pulp and paper will be produced by a plant to be installed in the province of Jujuy, where it will have the advantage of nearby stocks of mountain pine and of being able to form part of an integral exploitation of the forest. The projected capacity of this plant is 50 tons a day.

A plant for producing chemical short-fibre and semi-chemical pulp, of a capacity of 140 tons a day, will be installed in the Buenos Aires-Entre Rios delta, the region of greatest suitability for afforestation in the country possessing an artificial forest of over 100,000 hectares. This will partly make up for the country's shortage of mechanical pulp and will help integrate the productive processes of the enterprises already operating in the final stages of paper and paperboard manufacture.

During 1965/69 another integrated project, whose nature and location have not yet been entirely determined, will be carried out and eight existing plants will be integrated or expanded.

These new projects, though they will use existing natural resources, will make it necessary to increase the rate of afforestation of regions where trees of suitable quality can be grown and which have high forest yields in order to meet the needs of the projected long-term demand.

(b) Support for the equipment of the infrastructure

Replacements and/or expansions of the equipment inventory of the enterprises (mostly public) providing transport and energy services are now urgently needed.

Fortunately Argentine industry now has ample capacity for supplying them, for during the last five years new enterprises have been installed and existing ones equipped for manufacturing these types of capital goods. For various reasons - financing, lack of a definite purchasing policy,

/project engineering,

project engineering, etc. - many of the State purchases in this field have been made abroad, leaving idle much of the industry's capacity.

Manufacturing plans have been prepared in order that the needs of the different means of transport can be properly supplied; the chief of these concern ships, railway rolling stock and heavy lorries.

It is interesting to note that application of a manufacturing plan over a considerable period will by itself result in an increase of production capacity - in the first case because of the greater experience gained in dockyard operating and more efficient programming of domestic and imported supplies. Thus, the plan for ships of large tonnage, which will be carried out in the three shipways available for ships of that size, will result in the following annual tonnages delivered:

1966.........	16,000 tons
1967.........	36,000 "
1968.........	50,000 "
1969.........	70,000 "

The continuous increase in the activity of the domestic dockyards will have further effects of very great importance for the economy:

(i) A reduction of imported inputs by not less than 50 per cent.

(ii) A fall in costs, as a result of the increase in efficiency mentioned above.

The ships to be constructed during the period of the plan will be:

- 11 cargo boats, including 6 of 8,700 tons gross weight for Argentine Shipping Lines (ELMA), under a crash programme which has already been approved (plus two for which the outfitting stage will be completed);
- 3 coal freighters for State Coal Fields;
- 2 tankers for State Petroleum Deposits, one of 10,000 and the other of 20,000 tons gross weight;
- 6 dredgers (3 to be completed; 2 for clearing, of 1,500 cubic metres; and 1 research dredger);
- Smaller vessels (fishing boats, buoy-laying boats, tugs, boats for marine studies, sand freighters, etc.).

As regards the railway material industry, manufacture of 300 locomotives (220 already contracted for), 11,000 freight wagons and

/1,500 passenger

1,500 passenger coaches is envisaged for 1965/69, to which may be added the work involved in reconditioning approximately 600 diesel locomotives, 400 steam locomotives, 11,000 wagons, and 1,700 coaches and luggage vans.

In this case also, manufacturing capacity will increase as growing experience results in greater efficiency; at the same time there will be a gradual increase in use of domestic parts and of those which will eventually be imported under complementarity agreements with other Latin American countries, such as bogies, couplings, brake axles, etc.

Lastly, as regards heavy lorries (lorries over 5 tons), over 33,000 units will be added to the inventory during the period of the plan.

The energy sector may be divided into two major headings: electric power and fuels. It is estimated that the contribution of domestic industry to the equipment of the thermo- and hydro-electric power stations and the transmission and distribution networks, plus its production of machinery for self-supply generating plants, will amount to 16,700 million 1960 pesos; it will comprise primarily: alternators, high- and low-tension transformers, control and manoeuvre apparatus, generators.[2]

The contributions of the domestic machinery and equipment industry to the petroleum, gas and coal programmes have been estimated at 36,300, 16,400 and 1,600 million 1960 pesos respectively.

Apart from its now traditional supplies of tanks, metal shapes, and pump equipment, domestic production will provide a large and growing proportion of the following equipment: boiler equipment (especially important in distilling), pumps, valves, primary motors and different types of electrical equipment, and it is hoped that manufacture of large-scale compressors can be gradually included.

(c) Support for the equipment and technical development of the rural environment

In order to reach the targets projected by the plan for the agricultural sector, a programme for the equipment and technical development of the rural environment is envisaged. This is aimed at assisting expansions of farmed land and replacements of machinery, at producing a wider diffusion of mechanized farm equipment, and at developing a policy for controlling and building up reserves of cereals.

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[2] This figure does not include production of electric motors and other electrical machinery for industrial, commercial and family use.

The equipment needed for the increase in the area sown and the replacement and diffusion of machinery should consist of modern mechanical equipment suitable for rational exploitation of the land.

In this connexion four aspects have been given special consideration in making the projections:

(i) Equipping of each zone with the usual implements;

(ii) Increases of investments in equipment still little used, whose widespread use should be encouraged;

(iii) Purchase of technically more advanced implements than those now in use or of any which make for farming practices suitable to specific zones;

(iv) The expediency of altering the present proportions in which the different types of implements are used for each job in accordance with the ecological characteristics of each region.

This will result in an annual demand for tractors and agricultural machinery varying between 13,000 and 18,000 million 1960 pesos.

The cereals storage plan envisages an increase in installed capacity of 4,700,000 tons during the period. Industry will provide machinery and equipment amounting to 1,750, 923 and 1,784 million 1960 pesos respectively for the small-farm silo, farm grain hoists and port grain lifts programmes. The whole cost of the metal structures for the small-farm silos will be 4,848 million 1960 pesos.

If the targets of the plan for the agricultural sector are to be reached, industry will also have to provide during 1965/69 the fertilizers, herbicides and pesticides which are vital to a more rational and technically more advanced exploitation of the land.

The development of the petrochemical industry will enable these inputs to be produced in quantity and at suitable qualities and costs. For this purpose projects for nitrogenous fertilizer production capable of satisfying the estimated 1969 demand of 110,000 tons/year (expressed in equivalent nitrogen) will have to be carried out.

/As regards

As regards phosphorous and potassium fertilisers, the only prospects for production lie in the development of the Sierra Grande iron deposits in the former case and the Camarones alumite deposits in the latter.

Parallel with these projects, encouragement will be given to projects for vegetable and animal therapeutic preparations (fungicides, insecticides, etc.) in particular those which can be manufactured from domestic raw materials, e.g. the chlorine insecticides, whose production would partly solve the problem of the surplus in chlorine supply.

(d) The import substitution plan

Besides substitutions resulting from the projects listed above there is an additional series of goods which it is essential increasingly to produce in the country.

(i) Steel products;

(ii) Sodium alkalis;

(iii) Amianth.

(i) Steel products. If the programmed development of the iron and steel industry does not take place, imports of steel products in 1969 will amount to 165 million dollars more than those envisaged by the plan.

(ii) Sodium alkalis. Imports at present supply the whole of domestic consumption of Solvay soda (100,000 tons/year) and part of that of caustic soda (20,000 tons/year), under which two headings they cost the country some 7 million dollars a year.

A large growth in some branches of industry, such as glass, soap, detergents, pulp and paper, and rayon, for which sodium alkalis are inputs of some importance, will bring consumption of Solvay soda up to 150,000 tons and of caustic soda up to 125,000 tons by 1969. Because of the large drain on the trade balance, which imports on this scale would represent, every effort will have to be made to encourage domestic manufacture of these products.

(iii) Amianth. Imports of amianth have averaged 12,000 tons or almost 3 million dollars a year over the last 3 years. Exploitation of the chrysolitic amianth deposits of Jagüe, Valle Hermoso, La Rioja province will enable most of present imports to be replaced by domestic production. How and when this is to be undertaken depends on the results of programmed geological and economic studies.

/5. Organisations

5. Organizations with executive responsibilities in industrial development

(a) In the Government

Within the Structure of the Executive it is the State Secretariat of Industry, a dependency of the Ministry of Economic Affairs, which is responsible for matters relating to the regulation and promotion of industry. Its duties concern in particular:

- The organization and rationalization of industry;
- the control of manufacturing processes;
- technological research and quality tests;
- patents and trade-marks;
- the promotion and organisation of industrial co-operation;
- the promotion and organization of exhibitions, fairs, competitions, publications and other activities contributing to industrial promotion, whether inside or outside the country;
- participation in the formulation of exchange and credit policy and in the determining of customs tariffs, where these affect industrial promotion or the supplies of promoted industries;
- participation in the preparation and execution of immigration plans in such aspects as concern industry;
- establishment of industries;
- formulation of plans for the location of industries in relation to hydroelectric schemes;
- sponsorship of scientific and technical research into industrial matters and co-ordination of it in the public and private sectors;
- organisation and administration of the state industrial enterprises coming within its jurisdiction.

Generally speaking, the technical control and supervision responsibilities of the Secretariat devolve on its National Department of Industry while those of industrial promotion are the province of the National Department of Industrial Promotion. The latter department is responsible for carrying out the provisions of Laws 14780 and 14781, which govern uses of foreign capital in industry and industrial promotion, and their regulatory decrees N°s 5339/63 and 3113/64. It is also supposed to solve problems which appear in sectors of industry, thus helping to increase their efficiency, and to assist in the study of industrial export policies.

(b) Other government organizations

There are other dependencies or organisations within the government sphere which play a part in the industrial field. Those of most importance will be briefly listed here, while more detailed consideration will be given to some of them at later points in this work.

The General Department of Military Manufacturers, belonging to the Ministry of Defence or, more specifically, to the Secretariat of War (Argentine Army), over and above its specifically military activities has been entrusted with the development of the Argentine Steel Industry Plan (Law N° 12987). Its work in this field will extend from direct installation and operation of plants to promotion of integrated and semi-integrated private- and mixed-capital iron and steel units and other related development measures for the sector.

The State Secretariat of the Airforce - also a dependency of the Ministry of Defence - has a similar responsibility in its field, namely, for the aircraft factory which it runs through the National Department of Aeronautical Manufactures and Research (DINFIA).

The law for the organization of the different government ministries and secretariats assigns some of them powers in sectoral aspects of industrial activity additional to the aspects mentioned above. Their importance, as regards spheres of action, is less than that of the organizations mentioned above. These powers, and their holders, are as follows:

(i) Ministry of Works and Public Services: To promote industry and technical and scientific research, in matters within its sphere;

(ii) Ministry of Works and Public Services - Communications Secretariat: To promote industries in this branch;

(iii) Ministry of Economic Affairs - Agriculture and Livestock Secretariat: To promote farm mechanization and to manufacture machinery, fertilizers and agricultural pesticides on its own account.

(iv) Ministry of Defence - Secretariat of War: To direct, administer and develop army establishments and to prepare the mobilization of these and of any other establishments engaged in producing materials and effects entirely or mainly for use by the army which may be assigned it in case of war; to promote the industries, research and trials needed for the development and perfecting of material, equipment and effects entirely or mainly for use by the army;

(v) Ministry of Defence - Secretariat of the Navy: to direct, develop and promote industry, research and trials in connexion with shipbuilding; to direct its own dockyards, factories and other naval establishments and co-ordinate them with the industrial activity of the country; to provide the advice and technical assistance required by other state bodies and by private entities in connexion with ship design;

(vi) Ministry of Defence - Secretariat of the Airforce: to promote the aircraft industry and research and trials in connexion with it;

(vii) Ministry of Social Assistance and Public Health: to control all aspects of the manufacture and distribution of medicines, biological materials, drugs, diatetic preparations, insecticides, toilet preparations, mineral waters, medicinal herbs, and material and instruments of medical application, in co-ordination with the ministries concerned.

In the field of industrial credit an important part is played by the Industrial Bank of the Argentine Republic and, to a lesser extent, by the National Bank of Argentina. Some part is also played by the provincial banks.

(c) Sectoral programmes and official organizations with sectoral responsibilities

As was said above, the development of the iron and steel industry is governed by Law N° 12987, whose application is in the hands of the General Department of Military Manufacturers, which has executive, promotional and control capacities for this purpose.

In its executive capacity it has installed and now runs, in both its industrial and its marketing concerns, a mining-steel complex in Zapla, Province of Jujuy, of a production capacity of 150,000 tons of steel a year. It also runs metallurgic, chemical, explosives and other plants for military purposes. It has promoted the constitution of mixed enterprises, primarily in the chemical branch. Lastly, it controls the enterprises included in the Iron and Steel Industry Plan.

/The respective

The respective régimes which have been established for the motor vehicle, tractor and road-building machinery industries are applied and have usually been inspired by the State Secretariat of Industry, which also has functions of control with respect to them.

(d) Regional planning: the Federal Investments Council (CFI)

The Federal Investments Council was created in 1959 for the purposes of directing investments and providing technical assistance as the result of an interprovincial agreement signed and ratified by all the provinces, the municipality of Buenos Aires and the Government of Tierra del Fuego.

It is made up of three distinct bodies: the Assembly, composed of one representative from each province, which determines general policy; the Permanent Board, consisting of 8 provincial ministers; the General Secretariat, which provides the technical and administrative direction.

Its activities are financed by contributions from each province proportional to their contribution to national taxes.

Its work covers research, regional planning and technical assistance. Among much other planning work it has prepared: a document on the regional development of the Argentine economy, giving economic analyses by provinces; regional development plans; project assessments; material on regional promotion entities, and is now publishing an assessment of the natural resources of Argentina. It instigated and co-ordinated anIDB-provincial banks credit line which was directed in particular towards small- and medium-scale industrial enterprises excluding those not located in the interior of the country.

(e) Private initiative in industrial programming

As was said above, previous to the final drafting of the National Development Plan private initiative was informed through the entrepreneur organizations of its contents and design and of the programmes being prepared for the different sectors and was invited to express its criticisms and opinions.

For this purpose meetings with entrepreneur entities were held, a large proportion of them in connexion with industry and transport.

Some entrepreneur organisations have technico-economic bureaux which are taking part in programming. They mainly engage in regional programming work which they carry out in collaboration with the Federal Investments Council and with some of the provincial governments.

/Chapter IV

Chapter IV

CHIEF SECTORS OF MANUFACTURING INDUSTRY

An attempt has been made above to describe the broad characteristics of Argentine industry. In the present chapter its chief groups (primarily those which form the mayor part of the dynamic sector) will be analysed and some of the reasons already advanced for the importance given them in recent programming activities in Argentina will be further discussed. The analysis will, therefore, cover the ferrous and non-ferrous metals, chemical, capital goods, motor vehicle and pulp industries and, among the developed industries, textiles.

In addition to this, because of its economic importance, a brief, basic outline of the food and beverages industry will be given.

I. DEVELOPED INDUSTRIES

1. Food and beverages

This traditional industry is the most important of the industrial sector with regard to its percentage contribution to the value added, which has remained at about 20 per cent of the total, with some variations due to the evolution of the agricultural sector on the one hand, and to foreign trade on the other.

The different branches which make up the food and beverages group, together with their relative contributions to the total as used in the physical volume estimates of the national accounts, are as follows:[1]

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[1] Cf.: "Distribución del ingreso en la República Argentina", CONADE-ECLA, 1964.

/Contribution

	Contribution
Food and beverages	100.0
Edible oils, manufactories and refineries	5.6
Gaseous waters and non-alcoholic beverages	10.5
Rice, milling and other operations	1.3
Sugar	7.7
Preserved and pressed meat and similar meat products, not manufactured in the packing plants	2.6
Meat, manufacture, including slaughter of cattle in the packing plants	28.5
Beer	3.7
Sweets, jam and jellies	0.4
Vermicelli and other pasta	1.8
Fruit and vegetables, fresh and preserved	1.4
Biscuits	0.8
Flour and other products of wheat milling	6.3
Liquors, other alcoholic beverages and refreshments	4.3
Butter, cheese and other dairy products	8.0
Bread and other products made in bakeries	8.2
Preserved fish, shellfish, etc.	1.2
Wines, manufacture (wine cellars)	6.3
Yerba mate, milling	1.4

As well as supplying internal demand the food and beverages group exports some 16 per cent of its production (a minimum of 12 per cent in 1962 and a maximum of 22.1 per cent in 1963),[2] a percentage higher than that of the other developed industries. It also makes the largest contribution to Argentine manufactured exports as a whole. (See table 26.)

2/ Based on the processed information available.

/Table 26

Table 26

ARGENTINA: FOOD AND BEVERAGES GROUP, COMPARISON OF USES OF PRODUCTION a/

(Percentage distribution)

Uses	Developed groups		Dynamic groups
	Food and beverages	Total	Total
1. Final	92.9	80.2	52.4
(a) Investment	-	0.9	20.8
(b) Consumption	75.6	68.5	29.5
(c) Export	17.3	10.8	2.1
2. Intermediate	7.1	19.8	47.6
Production	100.0	100.0	100.0

Source: Prepared in accordance with "Distribución del Ingreso en la República Argentina" - CONADE - ECLA Research Programme.

a/ Year 1961.

2. Textiles

(a) Introduction

The textile industry is relatively one of the most important of Argentine industry. Until 1961 it had the second largest production value, after food and beverages, being subsequently displaced by the metal and motor vehicle and machinery branches.

It was first fully constituted as an industry in 1930, most of the establishments then installed being for weaving. Throughout the Second World War, when it was still in its incipient stages, it had to import yarn from other Latin American countries. Until several years after the end of the war it was still unable to consolidate itself. As a result of heavy pressure from demand it was established without any attempt at an orderly pattern of development, and it still retains some of the characteristics of that period, particularly in the weaving branch.

Its equipment and installations expanded rapidly during the '50's, especially in the cotton and wool sectors, with the result that, with the protection of import surcharges, almost all imports of textile goods have now been substituted.

At the end of the '50's the industry made considerable technological improvements, but owing to surcharges on imports of machinery and to financial difficulties it was unable to sustain this rate of renewal. In addition to this, the domestic manufacturers of machinery were not then capable of supplying machinery of this type.

Fluctuations in the income affect textiles consumption; they have produced several years of over-production in face of a falling demand, with the result that inventory accumulations reduced the volume of the investments which could be allocated for equipment renewals.

Taking 1952 as the base year (1952 = 100), in 1960 the index of the manufacturing production value was 120.4 while that of textiles was 91.6. In 1962 the situation worsened: manufacturing activity decreased by 10 per cent and the textile industry by 23.3 per cent with respect to the previous year. However, textiles began to recover in 1963 and is still showing an upward trend. Since the productivity index has been rising more rapidly than that of the physical volume this increase in production may be attributed to longer hours worked.

There is idle capacity in the industry; it is envisaged by the National Development Plan that this and its other problems may be partly solved by equipment renewals accompanied by industrial integration.

Its different branches will now be analysed. The following activities: cotton, wool and synthetic and artificial textiles have been considered, excluding the hard fibres, such as jute, hemp, pita, etc., which are relatively very unimpartant.

(b) Cotton

Since 1953 the Argentine cotton textile industry has been able to substitute almost all imported cotton products.

The quality of its production has gradually improved, as is shown by the increase in the average count, which was mainly the result of the relative increase in use of combed as against carded yarn.

(i) Spinning. In 1962 the spinning branch consisted of 64 establishments processing 1,036,584 installed spindles. Its spindles/inhabitant and kilogramme/year/spindle indexes are 20.07 and 83.23 respectively, which are high compared with those of other countries.

However, from a comparison of counts it appears that Europe produces 32 per cent more kilogrammes of yarn per spindle for equal counts and 12 per cent more given an average count of 20 for Europe and of 17.1 for Argentina.

The spinning industry is located mainly in the capital itself or in Greater Buenos Aires, which have 82 per cent of installed spindles. This means that most of its factories are a long way from the cotton producing zone.

There is a considerable degree of integration between spinning and weaving in terms of installed spindles, as also in terms of the number of establishments: there are few mills exclusively for spinning.

There are no studies with an adequate statistical basis of the state of spinning equipment, and what may be said of it is based on estimates. In 1962 the spinning machines were all frames, the intermittent system having been gradually replaced from 1930 onwards. After the Second World War, under the incentives of an advantageous exchange rate and the ample facilities granted, much equipment was imported. However, these imports were not carried on in a rational manner; many of them consisted of already obsolete equipment and in many cases the technical advance on existing spindles was only partial. Then in 1961 the textile industry underwent a crisis which discouraged renewal of machinery. Sample studies assign spinning equipment an average age of 10-15 years.

(ii) Weaving. Domestic weaving is of some relative importance. Among its characteristics are the following: (a) 10 per cent of the shuttle looms are manual, and (b) loom use shows high indexes (4,000 kilogrammes/year/loom), but as in the case of the spindles this is based on a large number of hours worked. This is due to the pattern of production which has been adopted: a large number of small-scale workshops which are worked by their proprietors, on their own account in periods of depression, or under contract with the larger plants in

/times of

times of boom. This system makes it very difficult to regulate the prices and qualities of the products. It also means that the technical and financial capacity of the establishments is very small.

The branch is heavily concentrated in the capital and in Greater Buenos Aires, both as regards shuttle looms and knitting and stocking looms. Its industrial concentration indexes reveal that it includes a large number of small-scale establishments, most of them engaged in custom production.

74.1 per cent of installed looms are automatic, which indicates that there has been a greater renewal rate than in spinning. Although no direct statistics are available, it is estimated that renewal of knitting machines has been the major factor in this high rate.

(iii) Raw material. Argentina produces enough cotton to supply its industry, but has to import long-staple fibre. Cotton production appears more or less stagnant, as regards both its physical volume and its quality. Improvements can be made, but climatic conditions make it impossible to guarantee harvests of uniform boll quality. Fibre exports have followed the fluctuations of internal consumption. Imports, on the other hand, have been growing in accordance with the rise in the average count.

(iv) Production and consumption. Production of cotton yarn showed a slight upward trend over 1950/62, but underwent considerable fluctuations as a result of changes in demand. The crisis which began in 1961 caused a large drop in 1962. (See table 27.)

/Table 27

Table 27

ARGENTINA: PRODUCTION OF COTTON YARN

(In thousands of tons and percentages)

Year	Carded	Percentage	Combed	Percentage	Total	Average count			Total production adjusted to No. 23.6
						Carded	Combed	Overall	
1950	73.4	95.8	3.2	4.2	76.7	13.48	27.9	14.08	39.1
1955	84.8	89.7	9.7	10.3	94.6	14.54	32.28	16.37	58.1
1960	84.6	88.7	10.8	11.3	95.4	14.64	32.80	16.69	58.1
1961	82.4	86.5	12.8	13.5	95.2	14.61	32.72	17.04	62.6
1962	66.6	86.4	10.5	13.6	77.1	14.52	33.46	17.10	49.4

Source: National Cotton Board.

In this period the average count increased considerably, providing a clear index of the growth of demand for better quality final textile products and of the trend in import substitution. The increase occurred mainly in combed yarns.

Since cotton yarn consumption has declined as a result of its substitution by synthetic fibres on the one hand and of the 1961 crisis on the other, the replacement of low - by high - count yarns tends to maintain the upward trend in production. The substitution by synthetic fibres has occurred mainly in the stockings heading.

Cotton fabrics production has shown the fluctuations characteristic of the textile industry. As import substitution has occurred at a greater rate than the decrease in demand the mobile averages of production have been slightly rising. (See table 28.)

/Table 28.

Table 28

ARGENTINA: PRODUCTION OF COTTON FABRICS BY TYPE

Year	Woven fabrics		Knitted fabrics		Stockings		Total (tons)
	Tons	Percentage	Tons	Percentage	Tons	Percentage	
1950	56 735	85.3	7 531	11.3	2 242	3.3	66 508
1955	65 769	86.9	7 835	10.5	2 016	2.7	75 619
1960	71 875	91.0	6 565	8.3	532	0.6	78 972
1961	69 771	90.2	7 113	9.2	465	9.6	77 350
1962	56 460	90.1	5 916	9.4	221	0.3	62 597

Source: National Cotton Board.

The substitution of cotton fabrics by synthetic fibres has also helped keep production, especially of cotton and knitted goods, practically static.

Consumption of fabrics shows enormous fluctuations, sometimes out of all relation to trends in industry as a whole, for which the most logical explanation seems to lie in over-production.

(c) Wool

The woollen textile industry is the oldest of the Argentine textile sector. Even so there is a shortage of statistics on it.

(i) Spinning. According to the studies made in 1963, the total of installed spindles is 346,000 - 238,000 for combed wool and 108,000 for carded wool - distributed among 74 establishments. In 1961 ECLA estimated that there were 360,000 spindles - 250,000 for combed wool and 110,000 for carded wool.

Both types of machinery are heavily concentrated in the capital and in Greater Buenos Aires, which have 91.6 per cent of carded wool and 88.6 per cent of combed wool spindles.

Combed wool spinning has a greater degree of industrial concentration than carded wool spinning. In the former case, 55 per cent of the establishments have less than 4 000 spindles each, and have only 25.6 per cent of all installed spindles.

Because of the vital importance of wool classification and washing for production of good-quality yarn the industry must be vertically integrated so as to include preliminary operations. However, this integration is not suitable for mills with less than 6,000 spindles, of which there are 54. Of the 20 remaining mills only 11 have washing plants. Vertical integration so as to include more advanced operations has not occurred on any scale except as between the combined combed/carded wool mills and weaving and sizing. And these are only the very largest establishments.

Though the present state of their fly frames is not exactly known, the combed wool mills have eliminated the self-acting machinery still used by the main producing countries. In the post-war period, when domestic wool spinning has begun on an industrial scale, a great deal of machinery was imported. In 1961 the average age of the machinery was estimated at 10-15 years.

(ii) Weaving. There is a shortage of data on this activity. ECLA in its study of the Argentine textile industry made a sample of 15 weaving enterprises, estimating that this covered 33 per cent of active looms. The sample indicated that there was a total of 1,800 installed looms.

From the main results of the analysis of this sample it appears that the quality of production is high, in spite of the age of the machines used. During 1961-1963 the use per loom index fell from 49.2 to 29.3 hours/year/loom, which has discouraged investments.

Wool weaving shows an out-of-date structure which will have to be modernized for satisfactory efficiency levels to be reached.

It is estimated that the location and concentration indexes should be similar to those of spinning, especially in the case of shuttle loom weaving. Knitted goods weaving is, according to the partial data available, more dispersed as regards location and has a lower degree of industrial concentration.

(iii) Raw material. Argentina is the third largest producer of wool in the world. In spite of the fact that the number of sheep was considerably reduced as a result of adverse conditions in sheep farming, production has not fallen. This implies that the yield per head has gone up.

Domestic production of wool supplies the whole needs of the domestic textile industry, leaving a huge exportable surplus.

(iv) Production and consumption. There is very little data on production and consumption of woollen yarns and fabrics. The production series given in table 29 has been calculated on the basis of assumptions which make the analysis of very limited application.

Table 29

ARGENTINA: PRODUCTION OF WOOL YARNS

Shearing season	Spinning consumption, excluding exported tops, of the production of the Argentine Wool Federation a/	Total spinning consumption excluding exported tops (calculated) a/	Production of combed yarns	Production of carded yarns	Total production
1958/59	50 000	56 000	17 600	10 800	28 400
1959/60	37 000	41 000	12 885	7 907	20 792
1960/61	45 231	50 116	15 750	9 665	25 415
1961/62	30 057	32 461	11 037	1 019	12 056
1962/63	21 590	23 317	7 321	448	7 769

Source: National Development Council.

a/ Exports of tops are excluded because they are not a spun product.

(d) Artificial and synthetic fibres and yarns

The following nomenclature will be used: Artificial fibres and yarns for the products of cellulose processing (rayon family), and synthetic fibres and yarns for the products of the processing of mineral substances (nylon, polyester, etc.).

(i) Production of fibres. There are three firms producing continuous fibre and one producing both continuous and cut fibre. The former have a capacity of 11,700 tons: a year; the latter firm's capacity is 4,500 tons a year.

As regards synthetic fibres, there are 6 firms producing nylon of all qualities, whose joint potential capacity is 12,700 tons a year: (7,700 tons/year of nylon for textile use and 5,000 for industrial use). This is enough to supply domestic consumption, which in 1964 was 11,200 tons.

Polyester production began in 1963 and has an installed capacity of 6,300 tons.

(ii) Throwing plants. The throwing of continuous nylon filament results in stretch and banlon yarns. These products have wide acceptance on the market and a large number of small-scale plants have been installed for producing them.

(iii) Weaving. It may be remarked that as in both shuttle loom wearing and knitting, the looms used for artificial and synthetic fibres are not very different from those used for cotton and the two types may in fact be used interchangeably. It is very difficult to make the relevant calculations and estimates for weaving of these fibres. It is made still more difficult by the fact that the activity has a very small degree of concentration, consisting to a large extent of handcraft workshops.

As regards its equipment, the situation is generally the same as that in the cotton knitted goods branch.

(iv) Production and consumption. Table 30 shows the evolution of artificial and synthetic fibres. Their growth has been very rapid, but, as can be seen, they were, in relative terms, harder hit by the 1962 crisis than cotton and wool.

Domestic production supplies

Table 30

ARGENTINA: PRODUCTION AND IMPORT OF ARTIFICIAL AND SYNTHETIC YARNS
(Tons)

Year	Continuous and cut rayon		High-tenacity rayon		Continuous and cut nylon		Continuous and cut polypropylene		Continuous and cut polyester		Cellulose acetate
	Import	Domestic production	Import	Domestic production	Import	Domestic production	Import	Domestic production	Import	Domestic production	Domestic production
1950	123	7 222	-	760	-	117					
1955	107	10 967	527	1 636	33	238					
1956	29	12 005	1 086	2 069	-	279					
1957	16	13 491	1 056	2 307	61	352					
1958	76	14 106	1 151	2 669	376	389					
1959	154	12 121	1 346	2 176	1 233	567			1 200		
1960	16	10 748	1 201	3 202	712	1 146			482		
1961	12	18 946	2 605	3 878	1 611	1 817			1 371		1 672
1962	10	8 033	2 591	3 812	1 399	2 236			830		899
1963	-	8 570	-	1 923	1 923	4 010	-	87	-	281	1 180
1964	-	12 271	-	3 699		7 064	-	213	-	2 840a/	1 878
1965						4 272 b/		280	-	3 160	2 100

Source: 1950-1963 CONADE.
1964-1965 National Department of Industrial Promotion.

a/ Estimated.
b/ First 6 months.

/II DEVELOPING

II. DEVELOPING INDUSTRIES

1. Capital goods

Argentina has reached an important stage of development in the manufacture of capital goods.

In the last five years a number of large-scale establishments, primarily producing transport equipment (ocean-going ships, railway rolling stock) and equipment for energy installations (generators, transformers, pump equipment, etc.), have been set up and consolidated, resulting in a remarkable increase in the domestic supply of heavy equipment.

The overwhelming importance of the public sector as a purchaser of these goods should be noted. It can, through its planned purchases, determine the direction of the production and investments of the supplying enterprises, of many of which it is the sole client. Taking into account that the essential characteristic of investment in capital goods production is their slow maturation and further that the equipment required by the public sector (ships and boats, railway stock electrical equipment, etc.) consists of the capital goods which it takes longest to produce, it becomes obvious that only by operating under a long-term programme of public investments can maximum use be made of the installed capacity of the supplying enterprises.

Internal demand has been unstable originally because there was no definite policy for public sector purchases and then further because financing problems diverted a considerable volume of purchases to foreign suppliers, who could supply the credits which were lacking for purchases at home. This process has in the last two years resulted in under-utilization of installed capacity, with the consequent elimination of economies of scale. This in turn has produced distortions in the price system which, combined with changes in the surcharge policy for imports of goods, has made the demand situation increasingly acute.

Many manufacturers, faced with this situation, have directed their efforts towards foreign markets, having in view the favourable conditions being created for exports by the evolution of ALALC and the needs of the developing countries of other continents. A few spectacular successes in this field (exports of machine-tools) should not, however, make them forget the need to secure the internal market. (See table 31.)

Table 31

ARGENTINA: EXPORTS OF CAPITAL GOODS INCLUDING SPARE PARTS

(Values in thousands of dollars and percentages)

Groups	1960		1961		1962		1963	
	Percentage	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage	Dollars
Machine-tools	4.9	46	4.8	66	19.9	368	30.3	2 032
Electrical machines	11.5	107	12.3	167	14.9	276	21.5	1 439
Agricultural machinery	13.4	124	5.0	68	1.1	20	5.2	350
Machinery for dynamic industry	1.0	10	9.5	129	5.7	106	3.1	210
Machinery for development industry	2.2	21	3.6	49	3.3	61	6.0	404
Others	66.6	616	64.6	874	55.0	1 017	33.8	2 266
Total	100.0	924	100.0	1 353	100.0	1 848	100.0	6 700

Source: National Statistics and Censuses Department.

/2. The

2. The iron and steel industry

In the first stage of its development the Argentine iron and steel industry specialized in final rolled products and, among them, in those which could be manufactured most simply and economically. As it developed it gradually substituted imports of non-flat rolled products, carrying out a very slow integration process which culminated in the entry into production of the first stage of the Argentine Mixed Iron and Steel Corporation's (SOMISA) plant. Thus, today there are still three types of plants, depending on whether they integrate all or two or carry out only one of the respective processes: blast furnaces, steel furnaces, rolling mills. Only two (SOMISA and Zapla Blast Furnaces) carry out the three stages from the ore upward; these may be considered fully integrated. Eight private steel mills and the Armed Forces Steel Factory count as semi-integrated: they begin their production at the second stage, consuming pig iron and scrap in Siemes-Martin and/or electric furnaces. About 80 processing plants produce rolled end products from domestic or imported billets and other semi-products.

As over the last twenty years, steel consumption showed a drop during the Second World War followed by a period of rapid recovery. During this period it reverted to the traditional sources of supply, having in addition the production manufactured by equipment installed during the war. It contracted again in 1952 and 1953 as a result of a large drop in the capacity for foreign purchases, but from 1954 onwards expanded, having now the benefit of a constantly growing supply of rolled end products manufactured by domestic industry.

Apparent consumption reached a maximum value of 2,725 thousand tons of steel ingots in 1961 (this includes imports of machinery and tools and excludes production of cast iron parts). Consumption per capita showed a parallel development, growing slowly from 1956 onwards and reaching, also in 1961, a maximum of 127.9 kilogrammes. It should, however, be mentioned that in 1905-1909 and 1910-1914 consumptions of 157 and 143 kilogrammes per capita, respectively were registered.

/From 1953

From 1953 onwards a marked trend towards an increase in flat plate products appeared. This was due to the growth of its most important concerning sectors (motor vehicles, tractors, boiler-making, etc.).

The most important characteristic of the evolution of domestic iron and steel industry in the last few years is the difference between the growth rates of the different stages of production (blast furnaces, steel furnaces, rolling mills). Thus, rolling mill capacity grew considerably production being 274,600 tons of rolled end products in 1953 and 1,329,800 in 1964.[4] But as blast furnace and steel furnace capacity grew more slowly there was a relative decrease in domestic supply of semi-manufactures and a consequent increase in dependence on the international market for these items. While rolling mill capacity grew constantly, steel furnace capacity remained for many years at 250,000 tons a year and blast furnace capacity at 50,000 tons, and only in the last few years have any notable efforts been made to increase them. When SOMISA's integral cycle plant was brought into production this disequilibrium was partly removed. But delays over its preliminary works, installation, putting into operation and complementary investments have meant that optimum use of its production capacity has still not been reached; its costs are still affected by internal bottlenecks and by the under-utilization of an infrastructure installed for a production double the present.

Installed production capacities are as follows: blast furnaces, 674,000 tons/year of pig iron; steel furnaces, 1,575,000 tons/year of steel ingots; rolling mills, 2,454,500 tons/year of rolled end products.

A further factor which had a considerable effect on iron and steel development was the fall in international prices of semi-products during the last few years. This was furthered by the dumping policies used by some of the large world producers and coincided with increases in blast furnace and steel furnace capacity and with an economic recession, as a result of which much capacity fell idle and large discrepancies between real demand and potential supply occurred. This conjuction of circumstances directed public and private plans for domestic production of the iron and steel products needed by the domestic industry for their intended course.

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[4] Preliminary estimates indicate that 1965 production represents an increase on 1964.

The recovery which has since taken place in sales and the upward trend in production have given rise to new problems.

The discrepancies between the productive capacities of the different stages of steel production - that is, the inability of the steel industry in its intermediate stages to meet its own induced demand - mean that growing volumes of semi-products and scrap will have to be imported to cover probable increases in final demand. These increases will also justify the full use even of antiquated and obsolete rolling mills whose use at other times would be anti-economic (their total production capacity is only 350,000 tons a year).

Because the programmed investments which would have increased its now limited degree of integration and eliminated its dependence on imports were long postponed and still have not been made, the domestic iron and steel industry will not be able to take full advantage of the remarkable recovery of consumption. And this in turn will be kept below the levels which it would have reached if,as was the purpose of those programmes, domestic supply had been placed on a better footing. Moreover, because the bottlenecks in the production processes mentioned above will not have been eliminated, it will not be possible to reduce present costs, and this will involve extra external expenditure for the rest of industry. (See tables 32, 33 and 34.)

Exports of iron and steel products only became considerable in 1963, when they reached a physical volume of 76,770 tons and a value of 9.9 million dollars. The main items were non-flat rolled products (47,011 tons) and seamless tubes (23,011 tons.)

/Table 32

Table 32

ARGENTINA: PRODUCTION OF PIG IRON, STEEL AND ROLLED PRODUCTS, 1953-1964

(Thousands of tons)

Year	Pig iron	Steel	Rolled products
1953	36.3	174.3	274.6
1954	39.5	186.1	526.0
1955	35.0	217.6	658.8
1956	28.7	202.4	613.0
1957	33.7	221.4	683.2
1958	29.1	244.2	876.2
1959	32.0	214.2	776.0
1960	180.1	277.0	771.5
1961	398.5	451.4	909.3
1962	396.4	644.5	761.0
1963	422.7	894.3	759.2
1964	589.3	1 267.3	1 329.8
1965 a/	160.0	309.7	312.1
1965 b/	-	1 347.4	—

Source: National Department of Industries.

a/ First quarter of 1965. Centros Industriales Siderúrgicos.

b/ Latin American Iron and Steel Institute (ILAFA).

/Table 33

Table 33

ARGENTINA: APPARENT CONSUMPTION OF STEEL ROLLED PRODUCTS, 1955-1963

(Thousand tons)

Heading	1955	1956	1957	1958	1959	1960	1961	1962	Growth 1953/62	1963
A) Non-flat products	-	-	-	-	-	-	-	-	-	-
1) Domestic production	558	506	558	702	623	585	684	558	322	499
2) Imports	191	59	28	10	72	76	31	27	21	9
Total	749	565	587	713	694	662	718	586	301	509
B) Flat products	-	-	-	-	-	-	-	-	-	-
1) Domestic production	67	79	86	103	94	90	115	112	75	199
2) Imports	403	373	403	634	369	431	610	438	303	217
Total	470	458	489	737	463	522	726	550	378	416
C) Steel tubes a/	-	-	-	-	-	-	-	-	-	-
1) Domestic production	33	27	38	69	59	95	99	89	89	62
2) Imports	35	16	32	37	141	116	24	66	33	137
Total	89	43	70	107	200	211	123	156	122	199
D) Total consumption										
(A + B + C)	1 289	1 062	1 148	1 558	1 358	1 398	1 568	1 293	801	1 125
Population (millions)	19.4	19.4	19.8	20.2	20.6	20.9	23.3	21.7	22.1	
Consumption per inhabitant (kilogrammes)	67	54	57	77	66	67	75	60	50.9	

Source: National Development Council. (CONADE).

a/ Domestic production consists of seamless tubes; the import figures include both seamless and welded tubes, whose volumes cannot be distinguished.

/Table 34

Table 34

ARGENTINA: IRON AND STEEL IMPORTS, 1955-64

(In million dollars)

Product	1955	1960	1961	1962	1963	1964
1) Iron ore	-	5.8	4.0	6.8	9.8	13.2
2) Raw materials	69.3	51.8	73.7	26.1	8.0	16.57
Pig iron	11.3	7.4	2.8	0.751	0.003	7.4
Scrap	-	0.04	0.1	0.003	0.4	7.1
Ferro manganese	0.08	0.06	0.07	0.081	0.038	0.07
Ferrosilicate	0.01	3.2	5.5	0.237	0.057	0.07
Steel for rolling	57.9	41.1	65.2	25.1	7.6	19.3
3) Fine and special Steels	9.7	18.0	26.3	19.0	9.0	...
Steels of 0.25 to 0.40 per cent C	4.6	4.8	11.6	7.6	1.5	...
Steel of over 0.40 per cent C	5.1	13.2	14.7	11.5	7.6	...
4) Rolled products: (A+B+C)	103.7	124.3	108.1	90.4	74.7	15.14
A) Non-flat	21.5	10.7	4.5	3.9	1.1	15.14
Rails	16.8	9.0	0.9	0.7	0.1	0.04
Round, square bars, etc.	0.4	0.1	0.2	0.2	0.007	12.3
L.T.U.Z and other shapes	3.7	1.3	2.3	2.0	0.8	2.3
Braces	0.6	0.3	1.1	1.0	0.2	0.5
B) Flat	71.5	74.0	96.1	68.3	38.2	63.2
Hot-or cold-rolled plates	45.0	52.9	75.9	49.0	17.3	37.3
Strips and ribbed plates	0.2	0.9	0.6	0.7	1.1	1.3
Tin plates	25.3	20.2	19.6	18.6	19.8	24.6
C) Steel tubes	10.7	39.6	7.5	18.2	35.4	22.3
Welded	10.7	39.6	7.5	17.6	32.6	18.9
Seamless	-		-	0.6	2.8	3.4
Total (1+2+3+4)	182.7	199.9	212.3	142.4	101.5	

Source: National Department of Statistics and Censuses (Foreign Trade Yearbook). Latin American Iron and Steel Institute (ILAFA). Prepared by the National Development Council (CONADE).

Note: There are no figures for tubes.

/3. Non

3. Non ferrous metallurgy

The analysis of this sector has been based on the apparent consumptions of lead, zinc, copper, aluminium and tin. Use of the lead and zinc is now based on domestic ores, which are gradually substituting imports. Since no important deposits of the others, except aluminium, have been discovered it is unlikely that this process will be carried out with respect to them.

Domestic production of lead has satisfied domestic consumption since 1954 (28,292 tons). But because its use has undergone wide fluctuations, production has remained at about 27,600 tons since 1957.

Zinc production (20,363 tons in 1963), which is closely related to that of lead, still does not wholly satisfy domestic needs, but its imports have been substantially reduced between 1959 and the present day. Its use has also not grown since 1960; in that year its apparent consumption was 19,439 tons and in 1963, 17,619 tons.

Import substitution has obviously ocurred in both cases. The stagnation of use occurred particularly with regard to the substituting products. But motor vehicle production will now create an increased demand for lead, for use in the manufacture of accumulators. It is believed that there are sufficient reserves for the envisaged increases to be met.

Copper, aluminium and tin are supplied by imports, almost entirely in the form of intermediate products, particularly ingots.

Copper consumption decreased rapidly between 1961 and 1963 (from 30,255 to 16,523 tons) and continued to do so afterwards, whereas in previous years it had tended to fluctuate widely around the same level.

Aluminium use reached a peak of 30,474 tons in 1961 and then fell to its former level of about 15,000 tons a year. Domestic production (1,000 tons in 1963) has so far consisted entirely of scrap recovery. But deposits have now been discovered in Misiones and Chubut which have prospects of economic exploitation.

Tin depends entirely on imports, and since 1957 its small domestic production has been stagnant. A continuous drop in consumption has occurred since 1957, interrupted by a recovery in 1960-1961. It was 2,744 tons in 1957, falling to 1,208 in 1963.

/4. The

4. The Chemical Industry

The chemical industry had one of the highest growth rates of any sector of Argentine industry during 1950-65.

The continuous upward trend is revealed by the index of its gross production value, which, starting from 53 in 1950, reached 104 in 1961 and 114 in 1965. (1960 = 100.)

The growth in its gross production value was mainly due to the installation of plants for a large number of intermediate chemical products (raw materials for plastics, artificial and synthetic fibres, and basic chemical products, some deriving from petrochemical processes), and, especially from 1959 onwards, to the petrochemical production then begun.

The costs structure of the industry has been distorted by the rise in the price of some of its raw materials, such as sulphur, and by the inefficiency of certain services, such as transport and electric power.

Contrary to what might be expected of such a dynamic sector, production was directed primarly towards consumer goods between 1950 and 1959.

Its expansion has been mainly due to the growth of the petrochemical sodium alkali and main acids branches. This means that its production structure has altered in favor of a greater proportion of intermediate products, which are major industrial imports, and, above all, of final consumer goods made from imported basic raw materials.

Table 35 gives its gross production and import values for 1953-1965.

The chemical industry contributes approximately 8 per cent of the gross industrial production value.

/Table 35

Table 35

ARGENTINA: GROSS VALUES OF MANUFACTURE AND IMPORTS OF CHEMICAL PRODUCTS

	Production (Millions of 1962 pesos)	Imports (Thousands of dollars)
1953	31 827	50 058
1954	37 226	88 577
1955	42 062	90 782
1956	44 592	78 089
1957	48 866	95 255
1958	52 914	75 602
1959	53 870	72 270
1960	56 232	62 198
1961	58 481	89 999
1962	54 826	81 178
1963	53 139	77 056
1964	59 091	114 882 a/
1965	63 500	125 000 a/

Source: CONADE and the National Department of Industries.

a/ Figure subject to revision.

Imports of chemical products represent 12 to 15 per cent of total raw material imports for manufacturing industry, and account for 10 per cent of the apparent consumption of chemical products. 85 per cent of them consists of basic intermediate products, which shows the poor degree of integration of the sector.

After a fall in production in 1962 and 1963, which though it extended to the economy as a whole was particularly great in the chemical industry, a rapid recovery was made in 1964 and 1965. This partly took the form of increased production on the part of the traditional enterprises but was principally due to the entry into operation of the major national petrochemical plants. Thus, in these years the 3 3 ethylene plants (capacity 32,000 tons/year), the 2 polyethylene plants (25,000 tons/year), the 2 methanol plants (26,500 tons/year), the phenol plant (8,000 tons/year), the benzene and toluene plant (43,000 metres^3/year) the SB-R synthetic rubber plant (35,000 tons/year), and the styrene plant (18,000 tons/year), plus several smaller plants and factories manufacturing products of these, all began production. The lamp black plant had already begun to operate in 1962. Apart from this there are a number of projects in progress, for fertilizers, raw materials for plastics, fibres, detergents, etc., which will represent an investment of 200 million dollars in 1966.

Exports to other Latin American countries have begun, giving excellent prospects for the future, and further expansions and equipment renewals have been announced.

5. Pulp and paper

The Argentine pulp and paper industry has carried out a substitution process at two levels.

In cellulose pulp the production - apparent consumption ratio rose from 23 per cent in 1951 to 48 per cent in 1962. Production has increased continuously, except in 1960 when the sector underwent a considerable recession. The increase has been greatest in the semi-chemical wood pulp branch, for which, in conformity with the trend all over the world, there is a large domestic demand. In spite of this, demand for long-fibre chemical pulp has remained too large to be satisfied by domestic production. Table 36 gives the figures for domestic production, imports and apparent consumption of cellulose pulp. No exports have been registered.

/Table 36

Table 36

ARGENTINA: APPARENT CONSUMPTION OF CELLULOSE PULP a/

(Tons)

Years	Domestic production	Imports	Apparent consumption
1951	38 335	128 747	167 082
1952	33 432	86 345	119 777
1953	35 948	36 307	72 256
1954	49 004	167 177	216 181
1955	54 174	202 353	256 527
1956	62 188	130 632	192 820
1957	64 911	147 814	212 725
1958	74 898	126 757	201 655
1959	81 477	112 685	194 162
1960	73 484	86 221	159 705
1961	91 289	141 174	232 463
1962	95 091	103 048	198 139
1963	107 903	97 448	205 351
1964	107 000	149 120	256 120
1965 b/	59 000	77 770	136 770

Source: "Encuesta en la Industria del Papel y la Celulosa" (Industrial Bank of Argentina - CONADE), 1964; National Department of Statistics and Censuses; National Department of Industry.

a/ No exports of cellulose pulps have been registered.

b/ First half of 1965.

a/Almost total

Almost total substitution has taken place in paper and paperboard (excluding newsprint). Domestic production supplies 90 per cent of consumption, the imports being special types of paper for which Argentina does not provide a large enough market to justify production. Nevertheless, several plants have begun to produce these with a view to the Latin American market and have exports, though as yet on a small scale.

Newsprint supply depends almost entirely on imports, which in 1961 amounted to 213,700 tons, with a value of 34.2 million dollars. Their annual average for 1953 was 155,000 tons, at a value of 24.9 million dollars.

The figures for apparent consumption of paper and paperboard appear in table 37.

Table 37

ARGENTINA: APPARENT CONSUMPTION OF PAPER AND PAPERBOARD

(Tons)

Heading	1956	1957	1958	1959	1960	1961	1962	1963
1. Newsprint	113 170	139 064	171 960	132 991	171 032	222 899	147 610	158 188
2. Office and printing paper	88 794	86 315	78 492	77 334	66 445	95 329	86 644	80 593
3. Packing paper	78 989	98 451	103 078	92 066	74 093	97 281	88 186	90 582
4. Paper to be corrugated	4 960	6 538	9 854	39 662	32 588	41 515	40 131	39 885
5. Tissue paper	9 724	9 712	11 252	10 571	8 857	15 436	18 215	13 500
6. Other types of paper	27 154	23 299	27 207	17 598	15 402	18 542	18 223	17 356
7. Bristol board	34 675	31 348	39 329	29 694	22 865	33 056	35 049	25 046
8. Paperboard	74 677	75 277	90 853	83 285	67 873	87 817	80 798	69 506
Totals	432 143	470 004	532 065	483 201	459 135	611 875	514 856	494 656

Source: National Department of Statistics and Censuses.

There are 27 cellulose pulp plants in Argentina with a total installed capacity of roughly 196,000 tons/year. For a number of different reasons 6 of them - mostly producers of agricultural waste semi-pulp - are now idle. The installed capacity of the remaining plants is roughly 171,000 tons/year. The 1963 use coefficient of the pulp industry as a whole was 0.56 and of the chemical wood pulp branch 0.82.

There are 87 paper and paperboard plants, with a total installed capacity of 590,000 tons/year, of which 58 per cent was used in 1963. In that year the highest use coefficient was registered by the plants of a capacity of over 30,000 tons/year (74.8 per cent).

The pulp and paper sector as a whole has shown a constant increase in manpower productivity. In terms of tons of pulp and paper per employee, it increased from 30.0 per cent in 1960 to 40.4 per cent in 1963.

6. The motor vehicle industry

Argentina has traditionally supplied its motor vehicles from abroad, paying for them with the foreign exchange resources derived from its agricultural exports. The evolution of motor vehicle imports during 1925-1963 appears in table 38.

However, first the crisis of the '30's and then the Second World War seriously reduced this external supply, not only preventing the inventory from growing but, because many units wore out, reducing it. Imports were again restricted in the '50's by the country's foreign trade problems. This gave rise to an accumulated demand for tourist and utility vehicles which was only minimally satisfied by means of permanent refits of the existing inventory. Imports were only made on any scale in certain periods - 1951 and 1956-1958 - and even then did not reach pre-war levels. The evolution of the motor-vehicle industry during 1925-1964 is given in table 38.

/Table 38

Table 38

ARGENTINA: EVOLUTION OF MOTOR VEHICLE IMPORTS, PRODUCTION AND INVENTORY 1925/29-1963

(In units)

Periods	Imports (annual averages)			Domestic production (annual averages)			Motor vehicle inventory		Number of vehicles per inhabitant		
	Motor cars	Buses lorries, chassis	Total	Tourist	Freight and passenger	Total	At the end of the period	Average of annual variations	Total	Motor cars	Lorries, etc.
1925/29	53 673	13 891	67 564	-	-	-	411 100	57 560	26.0	21.8	4.2
1930	34 920	14 224	49 144	-	-	-	435 800	24 400	36.6	28.9	7.7
1931/36	11 466	5 789	17 245	-	-	-	370 900	-10 817	28.5	21.8	6.7
1937/41	24 576	10 358	34 934	-	-	-	440 600	13 940	29.9	22.2	7.7
1942/46	2 178	2 374	4 552	-	-	-	435 400	-1 040	29.9	20.5	9.4
1947/51	11 681	16 584	28 265	-	-	-	574 300	2 778	33.3	19.7	13.6
1952/56	4 390	5 075	9 465	854	4 989	5 843	624 132	997	31.0	17.4	13.6
1957	10 778	36 409	47 187	5 461	10.174	15 635	670 982	46 850	33.1	18.0	15.1
1958	14 989	4 506	19 495	14 310	13 524	27 834	717 313	46 331	34.8	18.9	15.9
1959	6 090	825	6 915	18 455	14 675	32 830	788 542	71 229	37.6	20.5	17.1
1960	3 251	1 856	5 107	40 222	48 938	89 160	865 536	76 994	40.6	22.2	18.4
1961	2 876	2 071	4 947	78 635	57 631	136 266	972 759	107 223	44.8	24.6	20.2
1962	2 145	3 884	6 029	90 642	39 088	129 730	1 109 929	137 170	50.1	28.2	21.9
1963	863	823	1 686	75 663	29 492	105 155	1 216 139	106 216	55.3	31.7	23.6
1964	544	742	1 286	114 617	51 866	166 483	1 378 196	162 057	62.6	36.6	26.0
1965	260a/	241a/	501a/	133 738	60 472	194 210	...	...	...	...	...

Source: Foreign Trade Year books, Motor Vehicle Factories Association National Department of Industries.

a/ 1965: first six months only.

For many years domestic industrial activity in connexion with motor vehicles was confined to the assembly of imported motor cars and lorries, their repair and the manufacture of spare parts. After trial productions had been carried out by a few domestic enterprises and two foreign enterprises, concerned primarly with the production of utility vehicles, had set up plants in the country (1952 and 1955) a legal régime was established in 1959 for the promotion of domestic production, which fixed the conditions under which the industry was then built up. This régime envisaged a progressive increase in use of domestic inputs during 1959-1964, which has been partly fulfilled.

Production was undertaken, as well as by the enterprises already operating in the field and by other domestic enterprises, by a few foreign enterprises, whose locations were chosen in conformity with the capital establishment régime. These have provided most of the investments in machinery and equipment.

In 1959, 32,830 units were brought on to the market, of which 56.2 per cent were tourist vehicles (cars and station wagons) and the remainder freight and passenger transport units (pick-ups, lorries, vans, chassis, etc.). Subsequently, when the most urgent needs for utility vehicles had been satisfied, their share fell to 29.7 per cent.

The value of domestic production in 1963 (estimated at user prices) represented 4.3 per cent of the national income, of which 3 per cent corresponded to tourist vehicles purchased by families. This means that a large part of domestic production was absorbed by consumption, and it is estimated that 4.4 per cent of total expenditure from family budgets consisted of motor cars. This percentage rose to 5.7 in 1964, according to present estimates.

Although the industry has created a very considerable demand for imported goods, i.e. parts and spare parts, it has also had good effects on the domestic industrial structure, not only by inducing a flow of purchasers, but by spending new technologies and, through its high quality requirements, encouraging the use of more thorough methods subject to strict standards; this has been very apparent in the domestic industries supplying its parts and assembly units, such as iron and steel casting, metal-transforming, electrical apparatus, etc.

/The contribution

The contribution of imported inputs to the industry as a whole appears in table 39, and its employed personnel, by category, in table 40.

Table 39

ARGENTINA: CONTRIBUTION OF IMPORTED INPUTS TO THE PRODUCTION VALUE OF THE MOTOR VEHICLE INDUSTRY, THE VALUE ADDED OF THE INDUSTRY AND ITS IMPORTS OF INTERMEDIATE INDUSTRIAL PRODUCTS, 1959-1963

(In millions of dollars and pesos, and percentages)

Year	Use of imported inputs		Relation of the value of imported inputs to:			
			Production value at factory prices (constant of 1960) (percentage)	Value added		Imports of intermediate industrial products and raw materials (percentage)
	Million dollars	Million 1960 pesos		At factor cost (million pesos of 1960) (percentage)	At market prices (million pesos of 1960) (percentage)	
1959	9.3	775.1	7.4	20.9	15.0	1.8
1960	77.9	6 454.8	22.9	154.0	67.2	12.2
1961	100.1	8 289.4	19.6	81.8	50.1	11.6
1962	95.7	7 925.6	19.5	103.5	51.1	13.9
1963	54.3	4 501.9	13.7	49.5	33.1	10.9
1959-63	337.3	27 946.8	18.1	80.4	46.3	10.5

Source: National Development Council, Industries and Mining Section.

/Table 40

Table 40

ARGENTINA: PERSONS EMPLOYED IN THE MOTOR VEHICLE INDUSTRY, CLASSIFIED BY CATEGORIES, 1951-63

(In units)

Categories Year	Labourers	Industrial workers	Foremen	Adminis-trative staff	Technicians and professionals	Other personnel (managers, directors, etc.)	Total
1951	20	310	35	190	30	45	630
1952	28	816	56	250	35	55	1 240
1953	34	1 428	93	438	41	67	2 100
1954	42	1 620	138	460	48	72	2 480
1955	295	1 860	148	843	419	290	3 855
1956	661	1 893	185	934	554	222	4 449
1957	399	1 898	203	920	515	220	4 153
1958	2 562	2 025	304	1 572	728	254	7 445
1959	3 607	4 520	414	1 826	967	228	11 562
1960	4 956	6 502	749	4 419	1 531	463	18 620
1961	7 050	7 549	950	5 303	2 069	599	23 520
1962	7 397	9 381	1 089	6 219	2 636	824	27 546
1963	6 932	9 101	1 153	6 106	2 605	815	26 712

Source: National Development Council, from information provided by the enterprises.

Table 41 gives a comparison of the price evolution of domestically produced motor vehicles with that of other products.

/Table 41

Table 41

ARGENTINA: COMPARISON OF THE PRICE EVOLUTION OF MOTOR VEHICLES WITH THAT OF OTHER SELECTED PRODUCTS, 1958-1963

(Indexes: base year 1960 = 100)

Year	Motor vehicles			Iron and steel	Cost of living	Agricultural production	General level of wholesale prices
	Tourist vehicles	Freight vehicles	General				
1958	43.5	42.4	44.9	43.0	36.8	35.0	36.8
1959	83.7	77.6	82.8	92.1	78.7	88.0	88.4
1960	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1961	106.3	104.8	105.5	109.9	113.7	107.7	107.9
1962	131.6	122.2	128.9	140.1	145.7	132.1	132.5
1963	153.9	148.7	153.2	-	180.7	186.0	170.5

Source: National Development Council.

7. Durable consumer goods

The change in consumption patterns which resulted from the process of industrialization and urbanization produced an explosive increase of demand for these goods. In the postwar period, until the beginning of the '50's, this had to be satisfied by imports. There followed a stage of growing substitution, which has been completed more or less at the present time.

As regards electrical apparatus for the home and other goods of family use, the largest productions are of refrigerators, washing machines, cooking stoves, sewing machines and television sets, which together constitute 75 to 80 per cent of the total. (See table 42.)

/Table 42

Table 42

ARGENTINA: PRODUCTION OF DURABLE CONSUMER GOODS IN 1960, 1964 AND 1965

(In units and millions of 1960 pesos)

Goods \ Year	1960 Units	1960 Millions of pesos	1964 a/ Units	1964 a/ Millions of pesos	1965 Units	1965 Millions of pesos
Refrigerators	205 637	5 397	141 013	3 702	165 027	4 332
Washing machines	135 265	1 420	112 600	1 187	140 800	1 483
Cooking stoves	247 390	1 552	237 767	1 492	278 258	1 746
Sewing machines	141 542	877	61 888	383	83 158	515
Television sets	205 000	8 000	150 000	5 800	160 000	5 830
Other durable consumer goods		4 900		4 800		5 600
Total		22 146		17 364		19 506

Source: National Development Council - National Development Plan 1965-69

a/ Figures subject to revision.

Between 1953 and 1957 manufacture of refrigerators increased by 2 and a half times; it then remained at 200 000 units until 1964, and was some 40 per cent lower in that and the following year. In 1963 the inventory consisted of 2.1 million units, which represents 1 to every 10.7 inhabitants as against 1 to every 62 in 1951.

Demand for washing machines was satisfied by about 1958-59, after which domestic production decreased until 1964, when it was 112,600 units. In 1965 it decreased to 140,800.

Demand for cooking stoves is basically determined by the rate of private building. Production has remained relatively constant, at roughly 250,000 units a year. There has been a considerable substitution of kerosene by natural or liquified gas stoves.

Domestic production of sewing machines began in 1951 and grew rapidly until 1958, when 151,795 units of all types were brought on to

/the market.

the market. It remained at roughly that level until 1961, but has since then decreased to about 30 per cent of the maximum reached.

This decline in production is common to all the goods so far mentioned and should be attributed not only to a temporary contraction but to saturation of the market. This situation will not alter unless present income levels and distribution are changed; if not, production will continue to depend on the demand arising from the replacement needs of the existing inventory and from population growth.

However, there has been no such decline in demand for television sets, whose consumption has grown ininterruptedly since the first broadcasting station was set up, in 1951. Since serial production of sets only began in 1956, domestic needs were until then satisfied by imports. But in spite of the establishment of enterprises organized for large scale production, there still remain a huge number of small-scale establishments, which account for a considerable proportion of the total supply.

The industry depends very largely on imports of parts and spare parts. Since its production constitutes one of the most important headings of family expenditure on durable goods - the most important among electrical apparatus - growing demand will result in large increases of the foreign exchange needed for its inputs, which makes it vital that it should now develop towards a fuller integration.

/Chapter V

Chapter V

POLICY MEASURES FOR INDUSTRIAL DEVELOPMENT

1. Tariff protection

As from December 1st 1965, under Law N° 16688, Argentina adopted a new tariff nomenclature in accordance with which it established the import surcharges to be paid by merchandise passing through the customs.

(a) Nomenclature

The new nomenclature is based on the Brussels Tariff Nomenclature (BTN). It was prepared in accordance with an assessment by the Argentine National Tariffs Commission of the characteristics, needs and structure of the economy, and of the present pattern of development of foreign trade, keeping in mind the possibility of altering it as circumstances might dictate.

(b) Import surcharges

Law 16690, complementary to the above, abolishes the customs duties (specific and *ad valorem*) and the import surcharges previously in force and replaces them by a single surcharge to be paid on the normal value c.i.f. (cost, insurance and freight)(1) of the merchandise, except when it has an official base value, or(2) of its equivalent product, as established by the Executive, where this has a higher charge than the product itself. Article 5 establishes that imports of merchandise comprised in the lists which obtain in virtue of negotiations made in conformity with the Montevideo Treaty (ALALC) will pay the surcharges established in these lists.

The list of surcharges and their application as from December 1st 1965 was established by decree 8942/65.

(i) Normal value. According to article 1 of decree 8158/61, for the payment of import charges the value of any merchandise will be considered its normal price, understanding by this the price which would be fixed for it on the date of the presentation of the customs declaration in a sales transaction carried out, in conditions of free competition, between a buyer and seller independent from one another. According to article 4 of the same decree the normal price includes: freight charges and transport costs, insurance, commissions, brokers' charges, expenses involved in obtaining outside the country, the documents needed to intern the merchandise, duties and taxes payable outside the country, container and packing costs, loading expenses.

(ii) Official base values. Article 18 of the same decree establishes that in special situations, when there are substantial economic reasons for doing so, the Ministry of Economic Affairs, either on its own account or on the initiative of the Secretariat of Industry, if the interests of domestic industry are in question, may establish base prices conforming to the internal prices of the main exporting countries and additionally apply, where appropriate, compensatory charges of up to 100 per cent of the exchange surcharge of the merchandise.

Article 8 rules that the charges established by decree 3762/58, on the fund for contribution to the development of Argentine Iron and Steel Plan, and by decree 1284/62, on imports of forest products, will continue to apply but are to be brought into conformity with the nomenclature of its own decree.

(c) Advantages of the new customs instrument

It is considered that the new customs instrument will result in the following main advantages:

(i) Greater rapidity and flexibility in customs procedures.

(ii) Greater convenience as regards prior knowledge of the import charges to be paid by foreign merchandise for customs clearance, separate charges now payable for customs duties and exchange surcharges being combined into a single percentage.

(iii) Rapid classification of the merchandise to be interned, from the structure of the new nomenclature.

(iv) Elimination of the system of customs assimilation and classification now in force, the difference under the new nomenclature being that its structure and characteristics enable new headings to be introduced as the needs of the country require.

(v) The foreign trade statistics based on this nomenclature will be fuller and more co-ordinated than before and will be comparable with those of other countries.

/(vi) A better

(vi) A better basis on which to negotiate tariffs with other countries for reasons given in the previous point.

The nomenclature and the surcharges proper are divided into 21 sections.

The new nomenclature is also susceptible of adaptation to the Standard International Trade Classification nomenclature used for its statistics by the United Nations.

The surcharges apply to each article and, as stated above, consist of a single charge. The values vary from 0 to 605 per cent.

The gradation of surcharges enables those which fulfil a protective economic function to be distinguished from those which merely provide revenue.

The commodities which suffer the higher surcharges are naturally those which are liable to compete against domestic production to the detriment of its development.

On a similar economic principle, aimed at promoting both the technical development of the rural environment and the equipment and supply of industry, a number of raw materials have been exempted from import surcharges, and also the following manufactures: organic fertilizers (turf for ammonium chloride, ammonium phosphate, calcium phosphate); chemical products to combat grasshoppers; inorganic (mineral and chemical) fertilizers; newsprint; printed books, pamphlets and newspapers; architectural plans; gold ingots; aeroplanes of over 6 tons load; works of art, except reproductions and copies.

The maximum incidence of 605 per cent applies to racing cars and ambulances, and it may be noted that the next highest incidences also occur in the motor vehicles heading (405 and 505 per cent on motor cars of different types and coachwork); surcharges on the different motor vehicle parts and spare parts are generally higher than 300 per cent, and those on tractors are between 200 and 300 per cent.

/2. Other

2. Other forms of import control

The prior deposit system for imports is being established by means of circulars from the Central Bank. It has been in force since January 1965 and consists in the obligation on the importer, for his merchandise to be cleared, to certify before the customs that he has previously deposited in a commercial bank a sum in national pesos equivalent to 75 per cent of the value of its cost and freight.

This prior deposit is obligatory for carrying out the following transactions:

(a) Obtaining credits on I.O.U.;
(b) obtaining shipping documents from bank payment offices;
(c) clearing merchandise from the customs;
(d) buying foreign exchange futures.

But the obligation does not apply when the merchandise is:

(1) Included in the Argentine national list for the member countries of ALALC.
(2) Raw materials and products to be used for purposes of human and vegetable health, and fertilizers.
(3) Imports made by official departments.
(4) Imports made by charitable, scientific and technical non-profit making institutions serving the public welfare;
(5) Imports made by the Argentine Mixed Iron and Steel Corporation (SOMISA) and by the Greater Buenos Aires Electricity Board (SEGBA).

3. Industrial credit. Institutions administering it

The financial institution responsible for administering long- and medium-term industrial credit is the Industrial Bank of the Argentine Republic (BIRA).

Until 1944, when it was created, Argentina had no industrial credit policy. Credit facilities for industry were limited to short-term commercial loans and the financing of investments had to be carried out through mortgage transactions, which did not satisfy the growing needs of the industrialization process.

/The creation

The creation of BIRA and the later nationalization of bank deposits made it possible to institute a long- and medium-term credit policy for investment financing. At the same time, promotion loans were established to finance projects involving more risk than the normal. As a result of this policy the Industrial Bank began to make an important contribution to bank financing of industrial production.

The Bank provided an increasing proportion of this financing until 1956, when it registered a maximum percentage of 38.5. Subsequently its importance rapidly declined, and in 1962 it provided only 11.9 per cent.

There were several causes of this decline, but the most important was the bank reform of 1956, which denationalized deposits; as a result the share of the rest of bank financing increased rapidly from that year onwards, absorbing the margin left by the Industrial Bank.

In addition to this, the devaluation of Argentine currency affected BIRA more than the other banks, since, not in practice being a deposit bank, the only resource it possesses is its capital, plus an annual income of 50 per cent of the Central Bank's profits together with any profits it makes itself.

Its importance has declined still further in the last few years as a result of the problems created by the economic recession of 1962-63; it was then brought to a virtual standstill, its operations being confined to the renewal of development credits and the servicing of foreign liabilities not paid by the enterprises.

The large-scale re-equipment of industry of 1960 and 1961 was in fact carried out with foreign financing, much of it lent by suppliers of equipment. These foreign liabilities - of public as well as private enterprises - were guaranteed by the Industrial Bank, which at certain moments became answerable for as much as 1,100 million dollars.

The financial difficulties from which the industrial enterprises suffered as a result of the contraction of the market and the lack of market liquidity, combined with the drastic currency devaluation of 1962, prevented them from paying their foreign debts, with the result that these had to be amortized by the Industrial Bank from its own resources. In order to supply this type of compulsory credit it had to use almost all

/its quick

its quick assets and recoveries, as was reflected in the large growths of its short-term and development loan portfolios.

This growth was also due to the need of providing for the financial difficulties of the enterprises; they were first granted facilities for tiding them over the most immediate of these and then development credits, financed with funds provided by the Central Bank, to enable them to restore their production to normal.

This latter procedure - Central Bank rediscounts - constituted the chief source for grants of new loans.

The Industrial Bank's loans portfolio, which amounted to 26,855.1 million pesos on the 31st December 1963, was only 404.1 million pesos (1.5 per cent) higher on the same day in 1964, because its portfolio of rediscounts and advances from the Central Bank had increased by 1,849.0 million pesos (+42.3 per cent) and its own over-all portfolio had decreased by 1,444.9 million pesos (-6.4 per cent).

The magnitude of the unpaid loans of private enterprises, whose guarantees fell due, appears from the fact that the portfolio for this type of operations grew by 47 per cent (+1,736.6 million pesos) in 1964, while that for the ordinary operations of the Bank (current and foreign) decreased by 16.9 per cent (-3,181.5 million pesos).

4. Tax policy

Industrial enterprises are subject to the same treatment as all economic activities as regards direct taxes. Nevertheless, these taxes are different according to the different forms of organization of the enterprises, being at more favourable rates for stock companies.

The main direct tax is the gains tax. Since 1962 its rates have been as follows:

/Percentage rates

	Percentage rates
I. **Stock companies**	
(a) Constituted within the country	
1. Rate on taxable profits	33.00
2. Rate on dividends paid by the company	8.00
3. Rate resultant from the two above	38.36
(b) Constituted abroad	
1. Rate on taxable profit	38.36
II. **Income from debentures and other bearer securities (excluding shares)**	
(a) Holders established in the country	
1. Individual	9.00
2. Corporate	38.36
(b) Holders not established in the country	38.36

Several methods of modifying the gains tax have been used in order to stimulate production, e.g. authorization of increases in ordinary amortizations, reassessment of fixed asset goods, and deductions from the tax on increases in production capacity.

Industries which carry out a complete transformation of raw materials are allowed a deduction of 50 per cent of the tax base of investments made in movable fixed asset goods, except motor cars, on condition that the investment amounts to at least 10 per cent of those fixed assets at the beginning of the financial year. They are also allowed a deduction of 10 per cent of that of the construction or purchase of buildings for use in production.

A further form of direct taxation which has been applied - although only temporarily - in order to increase fiscal revenues is extraordinary taxes on profits.

As regards the group of indirect taxes, including the sales tax, the tax on specific items of consumption, the apprenticeship tax, and customs duties, it appears that their incidence has been very different in respect of the different activities concerned, as is shown by the following tables:

/INCIDENCE OF

INCIDENCE OF INDIRECT TAXES, BY SECTORS AND GROUPS

(Percentages on the production value)

Activities	1950-56	1958-61
Agriculture	1.6	1.2
Industry	8.6	5.8
Trade	6.0	7.9
Total	4.5	4.4

Industrial groups	1950-56	1958-61
Food	5.3	3.9
Tobacco	66.6	71.8
Textiles	5.7	4.5
Wearing apparel	3.9	1.9
Wood	4.9	2.6
Paper	5.9	3.4
Printing	1.8	2.1
Leather	6.8	5.8
Rubber	21.4	12.3
Chemicals	13.5	8.2
Non-metallic minerals	5.1	4.1
Metals	5.3	3.4
Electrical goods	3.8	3.7
Motor vehicles	4.0	2.6

Indirect taxes have also been modified in different ways in order to stimulate the activity of the different sectors. Into this category fall the exemptions granted in special cases on imports of capital goods and the refunds of taxes paid for imports of goods forming part of non-traditional products for export.

Since direct taxes are levied uniformly on the profits of all activities, industry only has higher taxes incidences than the other sectors in the case of indirect taxes.

A number of industrial promotion measures based on tax incentives are contained in decree 3113 of 1964, the regulatory decree for Law 14781. This establishes a system of optional benefits for the enterprise or investors, basically consisting of reductions of the revenue tax, exemptions from stamp duty, grants of special gas, electric power, fuel and transport rates, priority in equipment supply, etc. These incentives apply only to certain sectors and in respect of these, to the Patagonian, north-west and north-east regions in particular.

There are also provincial promotion laws based on exemptions from provincial and municipal taxes.

A number of studies tend to show that tax policy has not been able to stimulate or influence the direction of industry in any great degree. The entrepreneurs of Argentina do not take tax incentives as decisive factors in making their investments; they are basically influenced by the state of the consumer market and by the availability of credit facilities.

5. Legal régime for foreign capital and enterprises

Foreign capital applied to industrial activity is governed by Law N° 14780 of December 1958. This establishes that foreign capital invested in the country in the promotion of new productive activities and in the expansion and/or perfecting of existing ones, when these are necessary for the country's economic development, will enjoy the same rights as those granted by the constitution and the laws to domestic capital.

The entry of capital under the régime of this law requires the prior permission of the Executive, which is granted only on condition that the productive activities to which the capital will be applied provide sufficient

/technico-economic guarantees

technico-economic guarantees and contribute directly or indirectly to import substitution, increase exports or promote developments conducive to a rational and harmonious growth of the domestic economy.

The law establishes preference of consideration for investments destined for the manufacture of industrial raw materials from domestic resources, and/or the production of capital and intermediate goods which, by being installed or used in the interior of the country, will contribute to a better evolution of the economy. Preference is also established for enterprises which engage to reinvest their profits in the country.

To encourage these investments the Executive can grant incentives relating to customs duties, the tax or exchange régime and other systems of protection for industry.

The investments authorized in virtue of this law are registered at the free market exchange rate. The titulars of the investments can, through this market, transfer to the country of origin the liquid or realized annual gains of the investments concerned. Repatriation of the capital is exempt from all limitations, except those which may be established as a condition of the approval of each investment.

It may be added that the law specifies that sureties must be given guaranteeing that the capital to be interned is of foreign origin, that it will not be applied to any purposes but those specifically approved and that it will not affect the normal development of previously established domestic enterprises.

Proposals for investment of foreign capital which wish to benefit from the provisions of the law in question are subject to the requirements and proceedings established in regulatory decree 5339/63.

Decree 5339/63 establishes a régime of priority of equipment supply which allows the entry of certain machinery free of surcharges. The basic requirements to be fulfilled by the investment in this case are, in brief:

(a) that it contributes better techniques and technologies;

(b) that it results in better use of domestic raw materials or semi-products;

(c) that it benefits the trade balance;

(d) that it benefits the financial balance;

/(e) that

(e) that it is provided with proportionate circulating capital;
(f) that it guarantees stable sources of employment;
(g) that it involves reasonable production costs;
(h) that the customs protection needed for the development of the activity concerned is comparable to that which would be needed in an industrialized country.

On granting the benefits of priority of equipment supply to each proposal for investment of foreign capital, the Executive must include in the relevant decree an acknowledgement of the foreign origin of the capital, with an account of whether it consists of physical goods, foreign exchange transfers or other forms of investment; the investing firm will receive, as the counterpart of its investment, shares or capital quotas of the receiving firm to an amount not less than its investment's nominal value, which will not be transferable until three years after (in normal conditions) the industrial plant and/ or the expansion for which the investment was intended has been put into operation.

The investors will be able to transfer the profits and liquid assets resulting from the investment through the free exchange market. These remitments are in general liable to the gains tax. The form in which the refund of the capital concerned is to be made, and its time, will be determined for each particular case separately.

The values of the physical goods which may be interned as foreign capital investment must be determined in accordance with the sales flows of export markets.

6. Promotion of industrial exports

(a) Tax refunds

In order to facilitate foreign sales of non-traditional manufactured export products, a régime of refunds on merchandise manufactured in the country and destined for export has been established.

A percentage of 6, 12 or 18 per cent of the f.o.b. value of the product (according to its type) is refunded to the industrialists from the taxes which might directly or indirectly have been levied on the product and/or its raw materials in the internal market. The decree rules that, the fact

/of export

of export being established, the National Customs Department will within 15 days issue a certificate of tax refund payable to the order of the exporter for the resulting amount. This certificate is transferable by endorsement and applies to the taxes established by Law N° 11683 (gains, sales, contingent gains, the substitute tax for the charge on transfer of goods without payment).

The lists of products for each of the percentages mentioned above are as follows:

List A: 6 per cent refund for products of minimal industrial processing, their products and/or residues of industrial processes.

List B: 12 per cent refund for products of complex manufacturing processes and for powdered, ground and/or sawn minerals.

List C: 18 per cent refund for capital goods and their spare parts, intermediate and durable consumer goods with a high degree of processing, and manufactured minerals.

(b) Temporary admission of raw materials

Decree 5443/63 authorises the temporary admission of raw materials or semi-manufactures free of customs duties and additional customs charges, import surcharges and all other taxes.

The material admitted, after being processed, manufactured or transformed, must be re-exported within 180 days of its clearance from the customs on entry.

This system differs from that for the temporary admission of machinery,[1] under which the importer must pay to the Customs Authority the amount of all taxes and charges, as if it was a normal import, plus an additional 25 per cent of the total payment, and also from the DRAW-BACK system, under which each particular raw material is authorised with regard to the particular firm which imports it. Under this system the firm concerned must apply for the authorization, providing certain securities e.g. by presenting import and export contracts for the commodities to be manufactured from the raw materials to be imported. Each particular operation requires ministerial authorization. In the DRAW-BACK system, on the other hand, a particular type of commodity is specified; and the system may be used by all industrialists indiscriminately and even by the exporting firms concerned to sell the product in Argentina.

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[1] Temporary admission of machinery and equipment is dealt with in the section "Other aspects of industrial promotion".

In actual fact comparatively few applications have been presented and approved. This does not mean that the system is entirely without practical function; but the DRAW-BACK system (which will be discussed separately) is definitely more flexible and has been more widely used.

(c) The DRAW-BACK régime

In order to stimulate exports of non-traditional products and enable industry effectively to be promoted, thus increasing the volume of production, in 1960 Argentina instituted a draw-back régime similar to those already used in other countries.

It consists essentially in refunding to exporters the customs duties and exchange surcharges levied on imports of raw materials and semi-manufactures in proportion to their use in the exported product.

The application of the system is governed by decree 8051/62, which establishes the State Secretariat of Industries as the central authority for typifying the products to be exported, the technical studies involved being carried out by the National Department of Industry.

It may be remarked that for the purposes of the refunds, the wastage resulting from the manufacturing process is allowed for, and the exporter is guaranteed the receipt of his refunds by a certain date.

There has been increasing interest in export trading as a result of this measure, and in combination with decree 46/65 (for the 6, 12 and 18 per cent refunds on exports of non-traditional products) it has enabled Argentine industrial products to be introduced into foreign markets in a position to compete with similar products of other countries.

These exports have been mainly, though not entirely, made to countries within the Latin American Free Trade Area. Those to other countries have been: motorcycles, winches, steel tubes, steel shapes, wearing apparel and synthetic fibre carpet fabrics, to the United States of America; dyed wool yarn, to Canada; brass boxes for bed-plate bearings and electronic valves, to Holland; transparent sheet glass, to England.

/The motor

The motor-vehicle and tractor industries are covered by special promotion régimes, for which various special standards of typification have been established.

Standards of verification or control have been established in order that the specific function of the régime is not weakened by grants of refunds for exports incorporating raw materials or semi-manufactures of domestic origin.

In its first seven months exports of non-traditional products to the Latin American Free Trade Zone under the régime totalled 1,395,931 Argentine pesos. 96.9 per cent of these were made by merchants and only 3.1 per cent by exporting manufacturers.

From another point of view, it may be observed that 63.3 per cent of all exports of non-traditional products during this period were to the countries of the Area.

(d) ALALC and exports of manufactures

As regards Latin America, Argentina has concentrated its efforts in connexion with trade on the countries belonging to the Latin American Free Trade Association (ALALC).

Not enough time has yet passed since the Montevideo Treaty came into force to appreciate whether it has achieved the results expected of it. Nevertheless it has already achieved some notable results in the field of trade in manufactures within the Area, which has made considerable progress during the last few years.

Argentina has the second largest number concessions, after Ecuador, of those granted during the first four rounds of negotiations.

The first two of the complementarity agreements, which were envisaged by the treaty as auxiliary mechanisms for accelerating the process of establishing exemptions, were for statistical machinery and their spare parts and electronic valves.

The new pattern established in the Bogotá Conference for agreements of this type and the rapid progress made in the Sectoral Meetings have awakened a growing interest in favour of sectoral agreements.

Analysis of the consolidated lists (Exemption Programme) shows that in spite of the fact that there is plenty of room for negotiating further concessions for a great many industries of enormous importance to the Argentine economy, such as footwear, there are some items for which the number is still very small.

In any case decisions should ultimately be taken on the basis of the viability of the concessions and not on that of the number of products involved. Having given this explanation, it is worth pointing out that only 25 per cent of all exemptions corresponds to manufactures. This is due, first, to the fact that trade in the region traditionally consisted almost entirely of agricultural and livestock products plus a few raw materials and, second, to the protection maintained by each country for its industry.

There are, however, encouraging prospects of complementarity within the Area in the item covering products of the food, machinery, chemical and allied industries.

The total number of manufactured products liberalized by Argentina has reached 714 (the total of liberalized products for the Area is 8,450).

Argentina is anxious to maintain the preferential margins granted to the Area when its general measures might endanger them, as is shown, for example, by the exemption from the prior deposit required for certain imports in favour of the Area, the adaptation of the DRAW-BACK régime, etc.

Exports of manufactures from Argentina to the ALALC countries amounted to 11.4 million dollars in the first quarter of 1965; the chief headings corresponded to the food, printing and publishing, machinery (except electrical machinery), chemical products and textile industries.

7. Provisions relative to small-scale industry

In the industrial structure of Argentina a small-scale industry or enterprise is generally considered one having ten workers or less, in which usually the owner or owners work as part of the personnel in an administrative, technical or manual capacity.

This criterion prevailed for the 1957 Industrial Census, which took into account establishments of eleven or more workers.

The Industrial Bank, as will be seen below, established a system of loans for small-scale industry on a similar basis.

As regards the sizes of factories in general, it appears that between the censuses of 1946 and 1954 the proportion of enterprises having ten

/workers or

workers or less rose from 85 to 91 per cent of the total of enterprises censused, a trend which still continues.

(a) Benefits

Article 24 of decree 5339/63 establishes that the State Secretariats of Industry, Trade, Agriculture and Livestock, subject to prior approval by the Advisory Commission on Imports, may establish priority of equipment supply for small- and medium-scale industrial projects i.e., the introduction of machinery and equipment for them free of exchange surcharges, taxes of customs duties.

(b) Credits

(i) Industrial Bank of Argentina. BIRA has a standing system of special loans for the installation, expansion and improvement of small-scale industry located in the interior of the country. The Federal Capital and its neighbourhood, Rosario department in Santa Fe province and Capital department in the province of Cordoba are expressly excluded.

The aims of the system are as follows: (a) use of the raw materials provided by the area concerned; (b) employment of available manpower; (c) the satisfaction of local needs or those of other parts of the country; (d) that some effective contribution is made to the development of the regional economies.

The loans are available to small-scale industrial enterprises, understanding by them those which meet the following conditions: (a) capital of not more than 3,500,000 pesos; (b) annual sales of less than 10,000,000 pesos; (c) not more than 15 workers employed, or to be employed. The loans are granted for terms of 3 to 5 years and must be amortized in six-monthly payments.

(ii) Special loans. BIRA also grants special loans to industrial technicians and professionals who have graduated in the country in order that: (a) they can purchase technical and working equipment, and (b) the professional may be provided with the financial resources he needs to become a partner in small- or medium-scale industries not already directed by technical staff which has had university training. These loans are personal and have terms of 5 to 10 years.

/8. Direct

8. Direct state promotion through public or mixed enterprises

In Argentina the State functions as an industrial producer under the following different legal forms: state enterprises, mixed companies and decentralized agencies.

Further below the structure and activities of the main national state agencies in the industrial field will be examined in detail.

As regards provincial jurisdictions, in 1953 San Luis province passed Law 2381, under which a régime for the industrial, commercial or public service enterprises of that province was established. In accordance with this, Law 2466 was passed, which established standards for the meat packing and zymothermic industries of San Luis.

Tucumán province, under Law 2815 of 1959, created a régime for public enterprises of that province, also covering industrial, commercial and public services enterprises, exempting them from provincial taxes and contributions.

Entre Rios province has begun to carry out industrial promotion by constituting mixed companies.

Most of the other provinces also have legal régimes for public enterprises, but they only apply to the provincial electricity, sanitary services and transport enterprises.

(a) Legal régime of the state enterprises

The régime for the national public enterprises was first established by Law 18653 of 1949, which defined them as decentralized state entities, carrying out functions in trade, industry or in the rendering of public services of a similar kind. This was modified by Law 14380 of 1954. The corrected text of both laws was established by decree 4053/55 of 1955; their application is regulated by decree 5833/55. Law 15023 of 1959 modified and added to the régime.

As its basic provision, the standing legal régime recognizes that the State may take part directly in production, when this is in the public interest. The industrial, commercial and public service activities which the State considers it necessary to conduct may be carried out by entities to be known as "state enterprises".

These enterprises are subject to private law as regards their specific activities and to public law as regards their relations with the Government.

They operate as dependencies of the Executive and are supervised by the relevant ministry or state secretariat, in accordance with the nature of their activities.

The minimum specifications to be given in their statutes are: name, domicile, object, capital, organization, direction and management, requirements and prohibitions of the authorities, powers and obligations of the same, financial and contracts régime, and profit distribution.

The enterprises must submit to the Executive a plan of the activities to be developed in each fiscal year and a summary of those already carried out. These must be in turn submitted to the Congress.

The state enterprises, excluding those providing public services, are subject to all national, provincial and municipal taxes, rates and contributions existing or to be created, with the exception of the taxes on gains, extraordinary profits and contingent profits and the substitutive tax on the transfer of goods without payment.

Since their losses are covered by the Treasury and a large part of their investments are financed from the same source, they are bound to deliver part of their realized liquid profits to the Income Tax Bureau. They cannot be declared bankrupt and can only be wound up under resolution of the Executive, which can also transfer their capital as it sees fit.

In addition to the supervision of the relevant ministry or secretariat, all public enterprises are subject to a system of control exercised by the Executive. Firstly, through the Ministry of Finance, it appoints a syndic with functions of accounting and economico-financial control with respect to the relations of the enterprises with the Treasury.

Secondly, the National Accounts Tribunal exercises control by means of book auditing of the legal, economic and financial aspects of the enterprises, and appoints for this purpose an auditor for each enterprise.

Most of the state enterprises are active in the field of public services, and will not, therefore, here be described or analyzed further. Among these are: Railways, Water and Electric Power, State Gas, State Petroleum Deposits, State Coal Fields, Argentine Airlines, Argentine

Shipping Lines, Buenos Aires Subways, and the National Telecommunications Enterprise.

(d) Decentralized industrial agencies

Chronologically, the first of the major ventures of the State in the industrial field which still exist was the Military Aircraft Factory, created in 1927. It has since then undergone a number of transformations and now exists as the National Department of Aeronautic Manufactures and Research (DINFIA).

An agency along the same lines, which has also made a considerable contribution to the industrialization of Argentina, is the General Department of Military Manufactures; it began the manufacture of many products which had not before been produced in the country. A similar entity, though operating in a more restricted field, is State Dockyards and Ship Factories (AFNE).

But as regards the quantity of industries and establishments directed by the State, the most important event was the nationalization of 30 German enterprises, which, as enemy property, had their legal personality withdrawn during the Second World War. These enterprises were subsequently together formed into a nucleus under the National Department of State Industries (DINIE), whose founding statute was laid down in Law 13215 of 1947. This group was later increased by the creation of new enterprises.

The above will now be analyzed in greater detail:

(i) National Department of Aeronautical Manufactures and Research - DINFIA. As was said above this agency originated as the Military Aircraft Factory created in 1927. It is a dependency of the State Secretariat of Aeronautics.

DINFIA's function is to carry out the aeronautical policy of the country in its industrial aspect; it is responsible for developing aeronautical research and manufacture together with its allied and subsidiary industries.

It has developed aircraft manufacture with considerable success; the country now produces several different types of aircraft every year, including the two-jet Morane-Saulnier for military use and various civilian aircraft, among them small models designed specifically for operations on unprepared terrain. The number built in each year is now 80. DINFIA is the only factory normally functioning in the country.

The mechanism of the state enterprise has here been an effective means of promotion, establishing an industry for aircraft building and repair and the production of accessories, which from its high costs was beyond the reach of private initiative.

In 1952 DINFIA undertook on its own account (though subsequently in association with third parties) the first domestic production of motor vehicles. Its production in those years, though intended to be commercially viable, may be more fairly considered experimental. Because of excess installed capacity the vehicles produced involved very high costs. However, it resulted in the creation in Córdoba (where DINFIA's plants are located) of a nucleus of skilled workers and technicians, who have had extensive training in the specialized processes of the subsidiary industries created around DINFIA, which has meant considerable external economies for the motor vehicle plants later installed there.

This, together with the fact that DINFIA promoted the introduction of capital for the motor vehicle industry by forming associations with foreign enterprises, was the decisive factor in the location of the first motor vehicle plants (Kaiser, Fiat and Goliat Hansa, all in association with DINFIA).

During 1952-55, before the industry began to produce on a mass scale, DINFIA's production was 400 vehicles a year. It is now approximately 4,000 heavy-duty utility vehicles (diesel-engined cross-country trucks).

DINFIA is now making a profit from its activities. But since this is very samll and in the first period of its operations it suffered losses, the increases of its capital have in fact been made by means of state contributions.

It is governed by a board of directors, whose powers and responsibilities are laid down in Law 13653.

Its factories, which are directed by managers appointed by the board of directors and depend directly on the general administration are as follows: the Aeronautical Institute, the Tractor, Motorcycle, Aircraft, Aircraft Engine, Propellor and Accessories, Machinery and Machine-tools, Jet Engines, Instruments and Equipment, Parachutes and Metallurgic Factories.

(ii) General Department of Military Manufactures. The General Department of Military Manufactures was created in 1941 by Law 12709, as an autonomous entity, dependent on the Secretariat of War, with the right to conduct both public and private operations.

The powers and functions assigned it were as follows:

- To make studies, research and statistical compilations which may contribute to a fuller knowledge of the country's industrial prospects as regards the production of materials and supplies for war and relating to preparations for the corresponding mobilization of industry.
- To manufacture materials and supplies for war.
- To carry out prospection and mining operations for the production of copper, iron, manganese, wolfram, aluminium, beryl and other substances needed for the manufacture of war materials.
- To build the civil works needed for these purposes.
- To promote allied industries.

Although the basic activity of the department is supposed to be its research into and production of war materials, it is also allowed to manufacture similar goods for general consumption. This, its power to promote allied industries, the industrial and commercial agreements it has made with private entities and its right of taking part in mixed societies which have been legally constituted in the country have enabled it to undertake a wide range of activities.

It was provided, for the purposes of its management, with a board of directors, consisting of a president and six members, who are appointed by the Executive, subject to the Senate's approval; two of the members are civil and the rest - including the president - military officials. The board is under the obligation to plan production for periods of not less than five years ahead.

It is specified that in its purchases of materials it will give preference to domestic products when they are equal in condition, quality and price to their imported equivalents, including in the price of the latter the amount of their customs duties and expenses.

Limits and controls have been established on the production of similar articles. The installation and operations of arms and munitions factories must be authorized by the Executive after consultation with the Department. The use and distribution among different enterprises of strategic raw materials can be subjected to a quota system. A state monopoly on arms and explosives exports has been established, and the export of metal-bearing ores, without the permission of the Department is prohibited. Lastly, the Department is exempt from all taxes and contributions, except municipal rates.

During the last few years the General Department of Military Manufactures has gone even further in its policy of previous years, of turning over the production capacity of its military factories to articles of general consumption, aiming at as great a degree of import substitution as possible. The new items thus produced include special steels, plough discs, zinc rotogravure plates, alpaca for telephone control units, manganese for car springs and other springs for use in railway rolling stock, fertilizers, sulphur compounds, etc.

To appreciate the targets reached in the Department's production for civil use, it may be noted that this is now 80 per cent of the total production value of its enterprises; only 20 per cent corresponds to orders placed by the military secretariats.

The Department gives priority consideration to orders placed by state departments and, therefore, a large proportion of its production consists of materials for the use of such bodies as: State Petroleum Deposits, State Gas, the Ministry of Education, the Ministry of Labour and Social Security, the National Department of National Road Works, the Transport Secretariat, DINFIA, Department of Sanitary Works and the Communications Secretariat.

Its most important manufacturing establishment is Zapla Blast Furnaces, the only plant which carries out the integral cycle of steel production, beginning with the extraction of domestic ores and ending with the delivery of rolled products to the market. It was the first iron and steel works in the country and between 1950 and 1959 was the sole manufacturer of pig iron. Its present installed capacity is 150,000 tons a year. It possesses roughly 20 per cent of total domestic blast furnace capacity, a percentage which was considerably higher before the SOMISA plant came into operation.

/ (iii) State

(iii) State Dockyards and Naval Factories (AFNE). This entity functions in two branches: building and repair of ships, mainly for the Secretariat of the Navy (whose total needs it supplies) and manufacture of explosives for the Armed Navy and for private entities.

It has two establishments: the Río Santiago dockyard and an explosives factory. In order not to discourage private projects in these fields AFNE only undertakes jobs which are on too large a scale to be carried out by private industry or require instruments of types not possessed by it.

9. Regional industrial development policy

Although there are no specific regional development plans, certain measures for the special promotion of particular regions, such as Patagonia, the North-West and Corrientes Province, are now being applied.

(a) Promotion of the Patagonia region

The standing national legislation on the industrial promotion of Patagonia is based on decree 6130/61, which was intended to encourage the expansion of domestic enterprises already established in the region to the south of the Colorado River and its tributary the Barrancas, i.e. in the provinces contained in Argentine Patagonia, including Tierra del Fuego and the South Atlantic islands, and the installation there by other enterprises of technically efficient and economically viable industrial units.

The industries entitled to the benefits established in this decree are the chemical, petrochemical, aluminium and other metallurgic industries which perform the primary stage of metal production, whether they consist of one single enterprise or of economically independent complexes, the auxiliary fishing and meat-packing industries, and the textile and wool-preparing industries, as long as they meet the following conditions:

(i) They input energy and/or manpower and/or natural resources belonging to the region in a proportion of more than 50 per cent of the cost added in the region.

(ii) They contribute to import substitution or to an increase in exports.

/(iii) Their technico-economic

(iii) Their technico-economic characteristics make their location in the region particularly suitable, enabling them to produce competitively with centres manufacturing analogous products in other parts of the country.

The taxes and charges from which they are relieved are: the customs duties and exchange surcharges for the machinery and equipment they import, with the conditions established by Law 14.780 and decree 13277/59, the gains and extraordinary profits taxes, the substitute taxes for the charge on transfers of property without payment, the stamp taxes, the taxes on partnership agreements and their renewals, including capital increases and share issues. The decree also establishes that by domestic enterprises will be understood those belonging to physical persons of Argentine nationality or to companies constituted and domiciled in the country.

Decree 10361/61 extended the industrial promotion régime for Patagonia to the departments of La Pampa province: Puelén, Curacó, Lihuel Calel and Caleu-Caleu. It also extended it to include extraction and manufacture of minerals (excluding petroleum, gas and their subproducts), the wood impregnation, wood hardening and wood and pressed wood artificial drying industries, the ship-building industry, and dockyards and ship repair shops.

(b) Promotion of the North-West region

Decrees 9477/61 and 11316/61 establish special conditions for the provinces of Catamarca, Jujuy, La Rioja, Salta, Santiago del Estero, Tucumán, Chaco, Formosa, and the departments of Santa Fe province: 9 de Julio, Vera and General Obligado; of Córdoba province: Sobremonte, Rio Seco, Tulumba, Ischilin, Totoral, Cruz del Eje, Punilla, Pinas, Pocho, San Alberto and San Javier; and of San Juan province: Calingasta, Iglesia, Valle Fértil and Jachal. The benefits apply to already installed domestic enterprises which double their production capacity, covering only the new civil works and installations built, and to enterprises installing industrial units which are technically efficient and economically viable.

The activities favoured are: extraction and processing of minerals (including petroleum, gas and their by-products); wood or bagasse fibre impregnation, hardening and artificial drying; extraction of vegetable

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waxes from pulses; meat packing; metallurgy. The benefits are similar to those established for the Patagonia region, as also are the measures concerning investments in goods and services on the part of foreign enterprises. In addition to this the industries may obtain the privileges involved in being declared industries whose existence and development is in the national interest or that of being allowed to bring into the country any foreign personnel they may need, together with their families.

(c) Promotion of Corrientes province

Decree 11324/61, which applies to the departments: Capital, Mercedes, Paso de Los Libres, Goya, Bella Vista, Saladas, San Luis, del Palmar, Mburucuyá, Concepción, San Miguel, Berón de Astrada, San Martín, Itatí, San Cosme, Empedrado, General Paz, Lavalle and San Roque, provides benefits for domestic enterprises already installed there which double their production capacity, for the new civil works and installations built, as also for enterprises which instal technically efficient and economically viable industrial units. It covers the wood impregnation and hardening industries, artificial drying of wood and boards, pressed wood, processing of pulses, vegetables and fruit (excluding alcoholic beverages of whatever grade), meat-packing and metallurgy.

10. Manpower training programmes

(a) The National Council of Technical Education (CONET)

The most important Argentine organization at the national level in the field of manpower training for industry is the National Council of Technical Education (CONET), which is governed by representatives from teaching bodies, entrepreneur groups and the central workers trade union. It is financed by the federal government by means of a technical education tax (1 per cent of salaries and wages).

CONET gives instruction at a number of different levels:

(i) Professional and technical courses for young people aged 13 to 19.

(ii) Technical education and training courses for adults.

(iii) Training courses in artisan skills for young people from the rural environment; these are given in temporary establishments (lasting for 2 years in any particular place), since the low population density of some of the cities of the interior does not justify the establishment of permanent schools of this type.

(iv) Courses for the graduates of these establishments providing specialized technological training.

CONET has over 420 establishments operating under its jurisdiction and controls the activities of large numbers of private schools.

Generally speaking CONET's establishments have the generic title of National Schools of Technical Education, and are classified according to their functions and nature into: Mixed Regional Industrial, Factory, Professional for Women, Worker Training, Professional Training, Temporary Mission, Technical Cycle and Higher Education Institutes.

The industrial, factory and some of the training schools offer a regular course of studies of 6 or 7 years duration subsequent to complete primary education (7 grades). It is developed in two complementary cycles, basic and higher (3-3 and 3-4 years, respectively), and given in day and/or night classes depending on whether it is for young people or adults.

Technical education at all levels, as also the whole official educational system of Argentina (primary, secondary and university) is non-ecclesiastical, free and public.

(b) Study plans and programmes

The courses and subjects comprised in the technical education provided in the schools dependent on CONET are too varied to allow a general account of their arrangements and characteristics or the systems relative to their development. Some idea will therefore be given of them by means of a short description of the main instruction courses for operatives and technicians.

(i) Education of Technicians - Basic Cycle. The main purpose of the Basic Education Cycle is to provide a general education, including an introduction to technological and scientific knowledge and methods, for future technicians. It lasts for 3 years.

The educational activities are carried on in two shifts - morning and afternoon - from Monday to Friday. The proportions of time spent on theoretical and practical subjects are as follows: two-thirds on theoretical and theoretico-practical studies in classrooms and study-chambers and one third on practical instruction in industrial workshops and plants.

(ii) Education of Technicians - Higher Cycle. This consists of courses whose content is purely professional and scientific, given in lecture periods equal to those for the basic cycle; the distribution by hours is usually thirty hours a week spent on theoretical work and twelve on practical work in the field concerned.

(iii) Cycle for the training of skilled operatives. This is carried on in day-time courses, given in two shifts, with study programmes varying between 40 and 45 hours a week. It provides general, technological, aesthetic and professional instruction, plus practical workshop training and physical education.

A large proportion of instruction time is spent on practical training in the job concerned - from 50 to 60 per cent according to the field.

It is obvious enough that needs for trained manpower have still not been covered; but there has been an encouraging increase in the number of pupils taking the technical courses, particularly in the last few years.

11. Technological research

In Argentina there are both public and private entities engaged in technological research; the list below gives some of the more important of them:

(a) State Department

The following are some of the public research institutions, with their main characteristics:

(i) National Sanitary Works Laboratories:

- Controls water and sewage services throughout the country and inspects and controls building materials, particularly cement.
- Draws up the specifications for sanitary services and for the materials to be used in them.
- It is a dependency of the National Sanitary Works Authority.
- It has water chemistry and microbiology, general chemical and testing of materials laboratories.

(ii) Laboratories of the General Belgrano Railway:

- At present does the research needed by the State Railways Enterprise (EFEA).

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- Controls its services, particularly as regards fuel and oils, mechanical tests, electrical techniques and equipment, metallography, chemistry, etc.

(iii) Experimental Institute for the Building of Buenos Aires City:

- Chemical laboratories for testing of materials.

(iv) Laboratories of the National Road Works Department:

- Chemistry, soil analysis, asphalts and road materials.

(v) Testing of Materials and Technical Research Laboratories. Carries out tests of services for the Buenos Aires Provincial Ministry of Public Works, and industrial research, and makes studies on request for other organizations. It is an official entity of the Province of Buenos Aires.

(vi) Laboratories of State Petroleum Deposits. Organized to provide the services and research required by the official entity responsible for petroleum exploitation in Argentina.

(vii) Laboratory of the Metallurgy Department of the Atomic Energy Commission:

- Physics and technology of metals
- Research in general metallurgy.

(viii) National Institute of Industrial Technology

(ix) Laboratory of the Institute of Aeronautical Technology (DINFIA), a dependent of the Secretariat of Aeronautics:

- Equipped for the control and research services needed for aircraft and motor vehicle manufactures in general and by its parent body in particular.

(b) Universities

(i) Laboratory of the Faculty of Engineering of Buenos Aires

(ii) Laboratory of the Faculty of Physicomathematical Sciences of the University of La Plata

(iii) Laboratory of the University of Córdoba:

- Research groups on metallurgy
- Research groups on acoustics.

(iv) Laboratory of the University of the Litoral:

- Research groups on structures
- Institute of Industrial and Agricultural Chemistry.

(v) Laboratory of the University of Tucumán:
- Research groups on industrial chemistry
- Research groups on structural analysis.

(vi) Laboratory of the University of Cuyo:
- Institute of Agrarian Industries
- Institute of Mining Research.

(vii) Laboratories of the Faculty of Exact and Natural Sciences. Among these are the laboratories run jointly by the Department of Industries and the Faculty of Engineering of the University of Buenos Aires.

(viii) Laboratories of the Institute of Biochemical-Pharmaceutical Industries of the University of Buenos Aires.

(c) Private sector

A number of private enterprises and industrial organizations also have laboratories. The most important is the Argentine Institute of Portland Cement, which provides services for the building industry and is maintained by the manufacturers of Portland cement.

(d) The National Institute of Industrial Technology (INTI)

This was created in 1957. Its board of directors consists of four representatives of private industry, one from the Industrial Bank and three appointed by the Secretariat of Industry.

Its principal source of funds is its allocation of 0.25 per cent of the loans granted by the Industrial Bank and the Bank of the Nation to industrial enterprises. This represents an annual income of 150 million pesos, 76 per cent of its total resources (190 million); the remainder derives from tariffs, services rendered and other revenues.

Its system of operation provides for a group of central laboratories whose function is to render services to industry, and whose aim is to equip a chemistry laboratory, with special emphasis on analytic chemistry; a physics laboratory, emphasizing metrology, and a laboratory for the testing of building materials and metals. Moreover, as its main function is to promote interest in and the development of applied research among industrial enterprises, it contributes towards the formation of research centres on the basis of partnership arrangements between such centres and industrial establishments or groups, university institutes and national and provincial public entities.

The centres receive, apart from the services and use of the laboratories mentioned above, a sum of money divided equally between it and industry, which is assigned to a special fund for the purpose. INTI's contribution may be larger than that of industry in very special cases, if authorized by one of the Advisory Commissions and by the Secretariat of Industry.

Apart from the funds for forming research centres, private industry is now contributing to INTI a sum of nearly 30 million pesos a year.

INTI now has 22 research centres in operation, three of which have already finished their commission.

Their title as research centres was established by INTI's statutory law and gives them the administrative status of private but, under the National Accounting Legislation, parastatal entities.

INTI does not itself organize instruction or training courses, but the research centres have done so wherever it was needed by the industries which formed them and was not a duplication of the activities of the specifically educational organizations. To an increasing degree as new members are recruited, INTI provides for its staff opportunities of improving their training and gaining experience abroad, according to the field of activity of each. In this connexion it has enabled members of its staff to make journeys or stays abroad, and in the constitution of its research centres has envisaged resources for contacts between them and similar foreign entities.

It has also provided for visits of foreign technical personnel: experts from international organizations or members of well-known universities and institutes. Under this plan several experts have visited the Institute, in addition to a group from the International Labour Organisation, who came to work in connexion with the Productivity Centre of Argentina, and the participants in the congresses which INTI helped organize in support of the work of its centres, namely, on Fuel in Industry, held in 1961, and on Air Contamination, in 1962. INTI maintains contact with and receives technical assistance from the following organizations:

(i) The Technical Assistance Bureau of the United Nations, which helped to organize a centre, collaborated in preparing programmes for the economic use of sea-weed and contributed towards the provision of a group of consultants for the Industrial Design Research Centre.

(ii) UNESCO, which contributes to annual courses on marine biology for Latin American university students.

(iii) Bouwcentrum, of Rotterdam, Holland which contributed to the formation of Bouwcentrum of Argentina.

(iv) The National Industrial Fuel Efficiency Service, of Great Britain, which assisted CIPUEC to come into operation.

(v) The Armour Research Foundation with which INTI has made an agreement for the exchange of technical information.

(vi) P.T.B. of Braunschweig, Germany, which is now studying an important technical assistance programme in metrology.

(vii) The Réunion Internationale de Laboratoires D'Essais de Matériaux (RILEM), which has entrusted to CITAC the organization of its Latin American secretariat, in which 8 countries are to participate.

(viii) The Pan-American Health Office, which advises the Centre of Environmental Engineering and forms part of its Executive Committee.

The Institute also provides facilities for graduates of national and foreign universities wishing to make studies for their theses.

Through the work of its centres INTI has collaborated with approximately 300 enterprises in the development of specific working programmes.

12. Standardization

In Argentina the work relating to the preparation of technical standards is basically carried out by the Argentine Institute for the Rationalisation of Materials (IRAM). This is made up of official institutions, corporations, technical, industrial or commercial agencies and companies, educational establishments, libraries, and related entities and personal members.

It was founded in 1935 and counts as the doyen of standardization studies in Latin America.

The study of standards is carried on in accordance with a plan prepared by its Technical Department, taking into account the general requirements of its specialised units and the requests made by associated bodies, particularly the public departments. The Board of ISO (International Organization for Standardization) takes part in its direction.

The functions of the Institute, as defined in its founding statute, are:

(a) To establish standards, definitions, nomenclatures, testing and analysis methods, technical characteristics, specifications and all other necessary matters relating to materials and their applications, promoting their knowledge and study.

(b) To establish information services, form collections of samples, prepare statistics, etc.

(c) To promote the improvement and co-ordination of existing laboratories and the creation of new study and research laboratories.

(d) To take part in technical assessments and control of quality work, when its services are requested.

(e) To promote the improvement of production by means of the stamp testifying that a product conforms to its standards, which can be used under a license from it by industrialists whose products do meet these standards. The control of quality needed for this will be carried out, in accordance with the respective regulations, with the help of official or private laboratories, under the supervision of IRAM's technical staff.

In addition to the study of its own standards the Institute envisages in its working plan that of COPANT's (Pan-American Committee on Technical Standard) recommendations - especially as Argentina is the country in which its general secretariat has its central office - either taking part in the Pan-American negotiations preceding their preparation, or preparing or studying documents to be submitted to the periodical seminars on the subject.

IRAM collaborates with other entities in the preparation of standards, when specific studies of materials and products intended for special uses relating to the activities of these entities are needed.

The entities are:

(a) IAP, Argentine Petroleum Institute

(b) AAQIC, Argentine Association of Textile Chemical Manufacturers and Dyers.

(c) CID, Documentary Research Centre of the National Institute of Industrial Technology.

(d) CALFU, Argentine Firefighting Committee.

It is worth mentioning that the Argentine state technical bodies use IRAM's standards in their work.

13. Other aspects of industrial promotion

(a) Priority of equipment supply

In accordance with the standing legal regulations, imports of industrial equipment are generally liable to exchange surcharges and customs duties.

However, under the priority of equipment supply régime machinery and equipment not manufactured in the country or which, when so manufactures, can be convincingly shown by the interested parties not to meet the technological requirements of the industrial project for which it is intended, may be interned free of all exchange surcharges, taxes and customs duties. This exemption is granted in individual cases, in relation either to the establishment of new foreign capital or to the development of a project by domestic enterprises. Projects for the installation and/or expansion of industrial plants can obtain from the authorities the declaration of priority of equipment and its resulting benefits when they fulfil all of the following conditions:

(i) That the investment results in technical and technological improvements and makes for the increase, qualitative improvement and cheapening of domestic production.

(ii) That it directly or indirectly involves better use of domestic raw materials or semi-manufactures.

(iii) That it will benefit the trade balance by substituting imports or developing new exports.

(iv) That it will benefit the foreign payments balance on the above basis, taking into account the financing arrangements for the plant, the remittances of profits according to its expected rentability, the royalties to be paid, and the foreign loans or refunds of invested capital, whose terms of payment must be made to depend on the terms of technical amortization.

/(v) That

(v) That it is provided with circulating capital funds proportionate to the investment.

(vi) That it directly or indirectly guarantees stable sources of employment, on the basis of secure markets for its products.

(vii) That its production is carried out at a reasonable cost level in relation to international prices and makes for a higher degree of domestic competition.

(viii) That the levels of customs protection needed for the development of the activity are comparable with those obtaining in the industrial countries.

The government authority concerned (the National Department of Industrial Promotion) approves the projects on the basis of the following factors:

(i) Technico-economic study of the project in relation to the future of the enterprise, in particular taking into account:

(a) Quality assessment of the project.

(b) Assessment of the projector's capacity for organization and direction.

(c) Assessment of the projector's financial capacity.

(d) Comparative assessment of the product-capital ratio and other productivity ratios or indexes.

(e) The effects of the initiative on the trade and payments balances.

(f) Assessment of the exchange and customs protection applied for.

(ii) The financial aspects of the project, including capital contributions with the list of their titulars; foreign loans with a specification of their sources, terms of amortization and interest rates; royalty and/or technical assistance payments; expected rentability and terms of refund of the capital invested in cases where this may have been agreed.

(iii) The volume and diversification of the final production and the analyses and projections of the market concerned.

(iv) The manufacturing processes chosen and their fitness for the raw materials to be used and the degree of technological evolution of the industries concerned.

/(v) The

(v) The determining factors in production costs, particularly: (a) the quality and price of the raw materials, fuels and other forms of energy; (b) degree of efficiency in use of manpower; (c) transport costs; (d) fuel economies resulting from better use of the installations and from use of residues; (e) use of by-products obtained.

(vi) The quality and scale of the civil works and installations to be built.

(vii) The approximate costs of the industrial equipment to be purchased abroad and within the country.

(viii) Length of time needed for installing the plant and bringing it into production.

(ix) The factors taken into account in deciding the location of the enterprise.

(b) Temporary import of machinery and equipment

Decree 5341/63 authorises the temporary import of machines, equipment, instruments, moulds and dies needed for industrial processing and manufacture and the carrying out of civil works and projects, if considered to be in the economic interests of the country.

Before the goods can be cleared from the customs, the importer must pay the relevant import surcharges, taxes, customs charges and duties and all other taxes, bonds and guarantees not being accepted. When they are re-exported he will be refunded what he has paid, except for service charges.

As regards models or prototypes, permission is granted by the National Customs Department, in virtue of Article 114 of the Customs Law. If this department sees fit to seek advice from the industrial point of view it may pass on the request to the National Department of Industries; otherwise it decides it on its own account.

In accordance with the provisions of decree 5341/63 and resolution 610/64, negotiations for equipment and/or dies to be used in promoting new or special productions will be conducted with the National Department of Industries. In these cases, if no domestic production of the equipment or dies exists or if their manufacture would be anti-economical in relation

/to the

to the type and volume of the production to be undertaken, the Department can directly grant permission for a temporary admission of 6 months, renewable up to 3 years.

As regards the application of the decree, it may be remarked that it has been mainly used by industrialists of the die-making branch, and primarily that of the plastics industry.